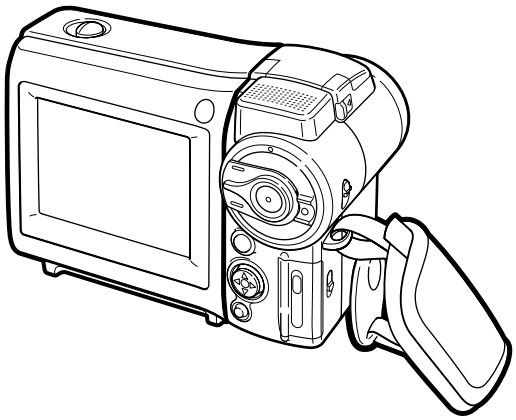
SHARP SERVICE MANUAL

S72M7VL-MC500

LIQUID CRYSTAL DIGITAL CAMCORDER NTSC



MODELS VL-MC500U VL-MC500K

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

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SERVICE MANUAL LIQUID CRYSTAL DIGITAL CAMCORDER NTSC MODELS VL-MC500U/K

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

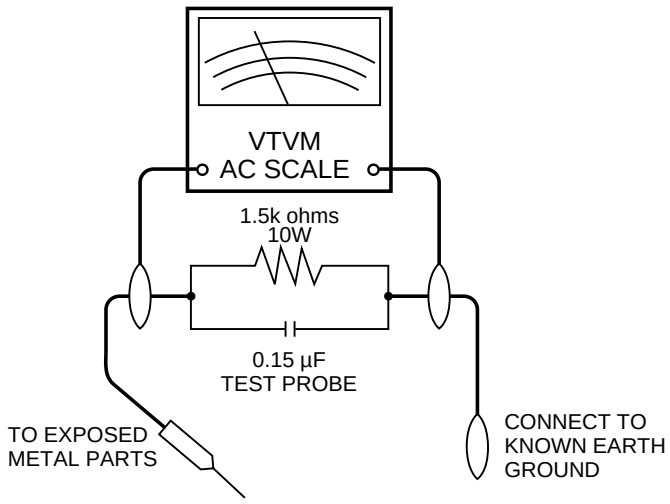
1. IMPORTANT SERVICE NOTES

BEFORE RETURNING THE VIDEO CAMERA RECORDER

Before returning the video camera recorder to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the video camera recorder.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor/capacitor networks, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

· Plug the AC line cord directly into a 120 volt AC outlet (Do not use an isolation transformer for this test).
· Using two clip leads, connect a l.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known ground, such as a water pipe or conduit.
· Use a VTVM or VOM with 1000 ohm per volt, or higher sensitivity or measure the AC voltage drop across the resistor (See Diagram).
· Move the resistor connection to all exposed metal parts having a return path to the chassis (antenna connections, metal cabinet, screw heads, knobs and control shafts, etc.) and measure the AC voltage drop across the resistor. Reverse the AC plug (a non polarized adaptor plug must be used but only for the purpose of completing these checks) on the set and repeat the AC voltage measurements for each exposed metallic part. Any reading of 0.45V rms (this corresponds to 0.3mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the video camera recorder to the user.



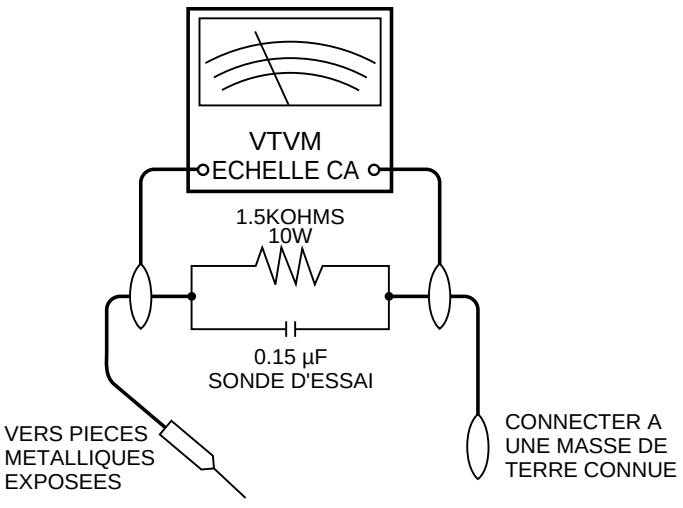
1. NOTES DE SERVICE IMPORTANTES

AVANT DE RENDRE LE MAGNETOSCOPE

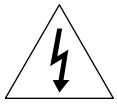
Avant de rendre le magnétoscope à l'utilisateur, effectuer les vérifications de sécurité suivantes.

1. Vérifier toutes les gaines de fil pour être sûr que les fils ne sont pas pincés ou que le matériel n'est pas coincé entre le châssis et les autres pièces métalliques dans le magnétoscope.
2. Vérifier tous les dispositifs de protection tels que les boutons de commande non métalliques, les matériaux d'isolement, le dos du coffret, les couvercles de compartiment et ajustement ou les boucliers, les réseaux de résistance / condensateur d'isolement, les isolateurs mécaniques, etc.
3. Pour être sûr qu'il n'y a aucun risque de choc électrique, vérifier le courant de fuite de la maniére suivante.

· Brancher le cordon d'alimentation secteur directement dans une prise de courant de 120 volts. (Ne pas utiliser de transformateur d'isolement pour cet essai).
· Utiliser deux fils à pinces et connecter une résistance de 10 watts 1,5 kohm en parallèle avec un condensateur de 0,15 µF en série avec des pièces du coffret métallique exposées et une masse de terre connue telle qu'un tuyau ou un conduit d'eau.
· Utiliser un VTVM ou VOM avec une sensibilité de 1000 ohms par volt ou plus ou mesurer la chute de tension CA entre la résistance (voir diagramme).
· Déposer la connexion de la résistance à toutes les pièces métalliques exposées ayant un parcours de retour au châssis (connexions d'antenne, coffret métallique, têtes de vis, boutons et arbres de commande, etc.) et mesurer la chute de tension CA entre la résistance. Inverser la fiche CA (une fiche intermédiaire non polarisée doit être utilisée à seule fin de faire ces vérifications.) sur l'appareil et répéter les mesures de tension CA pour chaque piéce métallique exposée. Toute lecture de 0,45 V rms (ceci correspond à 0,3 mA rms CA) ou plus est excessive et signale un danger de choc qui doit être corrigé avant de rendre le magnétoscope à son utilisateur.

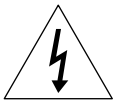


WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO WET LOCATIONS.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER. NO USER·SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



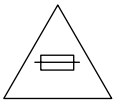
This symbol warns the user of uninsulated voltage within the unit that can cause dangerous electric shocks.

This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION

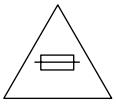
This symbol mark means following.
For continued protection against fire hazard, replace only with same type fuse.
(CP1; 1.25A 24V, CP2; 1.25A 24V, CP3; 1.25A 24V, CP4; 0.5A 50V)
*Note: CP4 is except for VL-MC500K.

Camcorder only

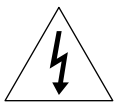


This symbol mark means following.
For continued protection against fire hazard, replace only with same type fuse.
(F1; 1A 50V)

Battery Charger only

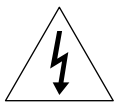


ATTENTION: POUR REDUIRE LES RESQUES D'INCENDIE OU DE CHOC ELECTRIQUE, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE.



ATTENTION
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR

ATTENTION: AFIN DE REDUIRE LES RISQUES DE CHOC ELECTRIQUE, NE PAS RETIRER LE COUVERCLE, AUCUN ORGANE INTERNE NE PEUT ETRE REPARE PAR L'UTIUSATEUR, CONFIER L'APPAREIL A UN DEPANNEUR QUALIFIE.



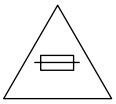
Ce symbole signale à l'utilisateur la présence d'une tension non isolée à l'intérieur de l'appareil qui peut être la cause de secousses électriques dangereuses.

Ce symbole avertit l'utilisateur que des instructions importantes relatives à l'utilisation et àl'entretien se trouvent dans le manuel accompagnant l'appareil.

ATTENTION

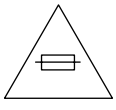
Ce symbole signifie que l'on devra utiliser un fusible de même type (CP1; 1,25A 24V, CP2; 1,25A 24V, CP3; 1,25A 24V, CP4; 0,5A 50V, F1; 1A 50V) pour assurer la sécurité.
*Note: CP4 est excepté VL-MC500K.

Camcorder seulement



Ce symbole signifie que l'on devra utiliser un fusible de même type (F1; 1A 50V) pour assurer la sécurité.

Chargeur de la pile seulement



⚠ CAUTION
BEFORE BATTERY DESTROY

☐ NICKEL-CADMIUM BATTERY

The following program is available in the United States. Please consult local environmental authorities concerning the availability of this or other programs in your area.

The RBRC™ Seal

SHARP participates in the RBRC™* Nickel-Cadmium Battery Recycling Program in the United States. The RBRC™ Seal on our battery pack contained in our product indicates that SHARP is voluntarily participating in an industry program to collect and recycle these batteries. The RBRC™ program provides you with a convenient alternative to placing spent Nickel-Cadmium battery packs into the trash or municipal waste stream, which is illegal in some areas. At the end of their useful life, the Nickel-Cadmium battery can be dropped off at the nearest collection center for recycling. For information on the nearest collection center, call 1-800-8-BATTERY or your local recycling center. If you are located outside the United States, contact your local authorities for information concerning proper disposal and/or recycling of this battery. SHARP's involvement in this program is part of our commitment to protecting our environment and conserving natural resources.

[Footnote] *RBRC™ is trademark of the Rechargeable Battery Recycling Corporation.

☐ NICKEL-METAL HYDRIDE BATTERY
☐ LITHIUM or LITHIUM-ION BATTERY
☐ SEALED LEAD BATTERY

Battery disposal
Contains the above (Rechargeable) Battery. must be recycled or disposed of properly.
Remove the Battery from the products and contact Federal or State Environmental Agencies for information on recycling and disposal options.

■ PRECAUTIONS FOR USING LEAD-FREE SOLDER

1) Employing lead-free solder
"Main PWB", "Camera head PWB", "Audio I/O PWB", "Card PWB", "Inverter PWB", "Operation PWB", "DC Jack PWB", "CCD PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper

2) Using lead-free solder
When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.
As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit. If you are not familiar with how to obtain lead-free solder or soldering bit, contact our service station or service ranch in your area.

3) Soldering
As the melting point of lead-free solder (Sn-Ag-Cu) is 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solderability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.
Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.
If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.
When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Lead-free wire solder for servicing

Part No.	★	Description	Price Code
ZHNDAi123250E	J	ϕ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm 1kg(1roll)	BM

2. SPECIFICATIONS

Signal System:	NTSC standard
Recording System:	2 rotary heads, helical scanning system
Cassette:	Digital VCR Mini DV video cassette
Recording/Playback Time:	90 minutes (DVM60, LP mode)
Tape Speed:	SP mode: 18.812 mm/second LP mode: 12.555 mm/second
Pickup Device:	1/4" (6.4 mm, effective size: 4.5 mm) CCD image sensor (with approx. 1,330,000 pixels including optical black)
Lens:	10 × optical/300 × digital power zoom lens (F1.8, f=3.6-36.0 mm), full-range auto focus
Lens Filter Diameter:	30 mm
Monitor:	3" (7.5 cm) full-color LCD screen (TFT active matrix)
Microphone:	Electret stereo microphone
Color Temperature Compensation:	Auto white balance with white balance lock, outdoor or indoor
Minimum Illumination:	3 lux (15 lux measured by EIA standard)(with gain-up, F1.8)
Still Image Compression System:	JPEG base line conformance
Still Image Recording Format:	JPEG (Exif2.1)
Still Image Recording Medium:	SD Memory Card, MultiMediaCard
Power Requirement:	DC 7.4 V
Power Consumption:	5.0 W (during camera recording in Full Auto mode with zoom motor off and backlight normal mode)
Operating Temperature:	32°F to 104°F (0°C to +40°C)
Operating Humidity:	30% to 80%
Storage Temperature:	–4°F to 140°F (–20°C to +60°C)
Dimensions (approx.):	5 23/32" (W) × 3 7/16" (H) × 2 5/8" (D) [145.0 mm (W) × 87.0 mm (H) × 66.6 mm (D)]
Weight (approx.):	1.12 lbs (508 g)(without battery pack, lithium battery, video cassette, lens cap, lens hood and card)

AC Adapter
UADP-0339TAZZ(MC500U)
UADP-0341TAZZ(MC500K)

Power Requirement:	AC 110-240 V, 50/60 Hz
DC Output:	10 V
Dimensions (approx.):	1 31/32" (W) × 1 1/16" (H) × 2 19/32" (D) [50mm (W) × 27.0mm (H) × 65.5 mm (D)]
Weight (approx.):	0.22 lbs (100 g)

Specifications are subject to change without notice.

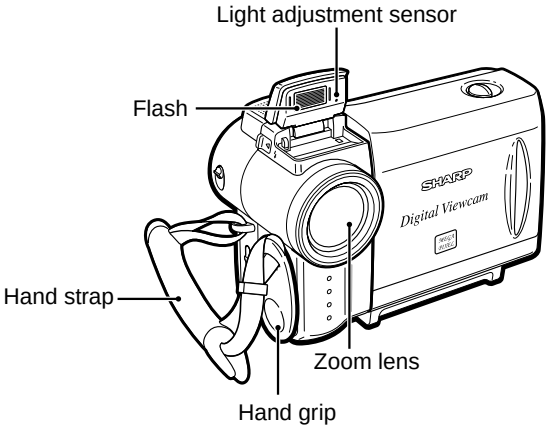
SERVICE INFORMATION (For the U.S.)

For the location of the nearest Sharp Authorized Service, or to obtain product literature, accessories, supplies or customer assistance, please call 1-800-BE SHARP (1-800-237-4277) or visit SHARP's website (http://www.sharp-usa.com)

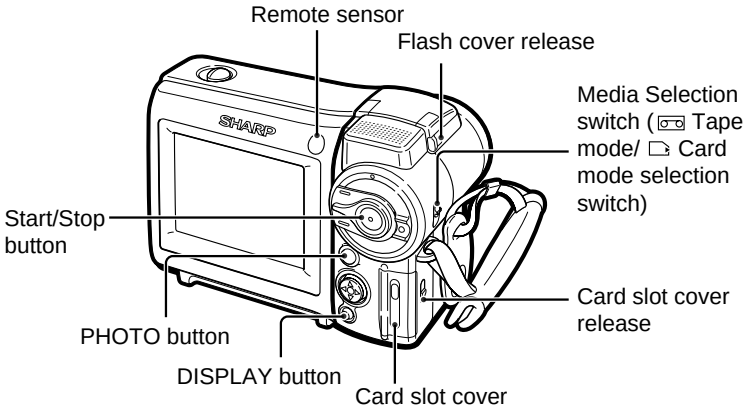
3. PART NAMES

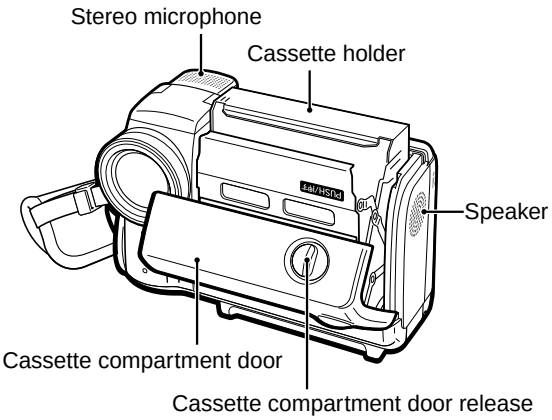
For details on the use of each control.

Front view

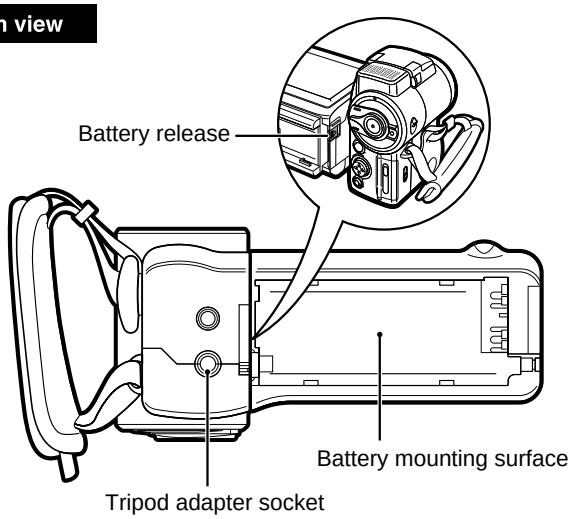


Rear view

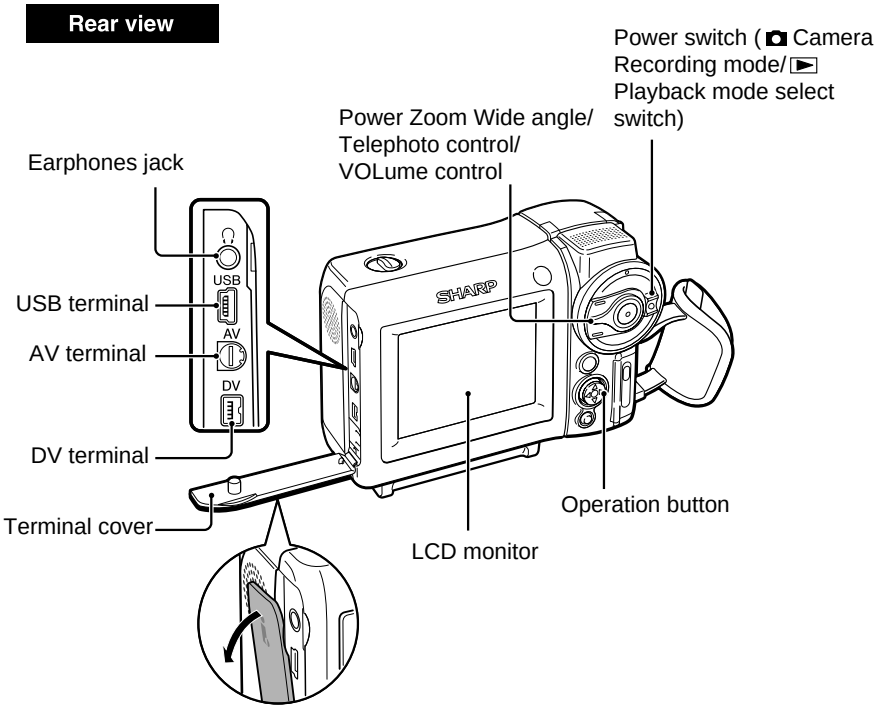




Bottom view



Rear view

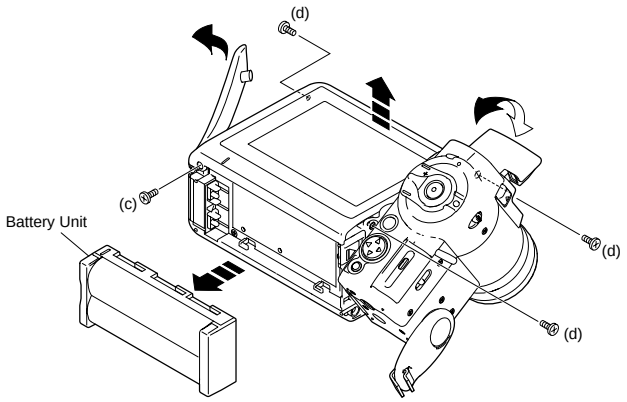


4. DISASSEMBLY OF THE SET

Note:

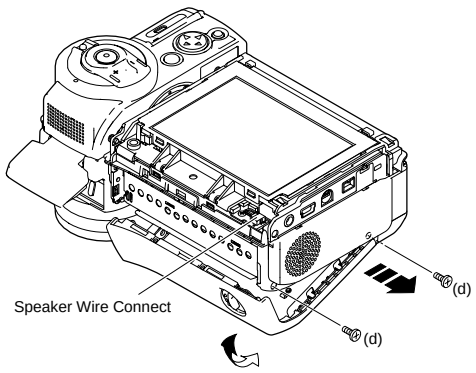
Before removing the cabinet, turn off the power supply, and ascertain that the battery have been removed.

1.



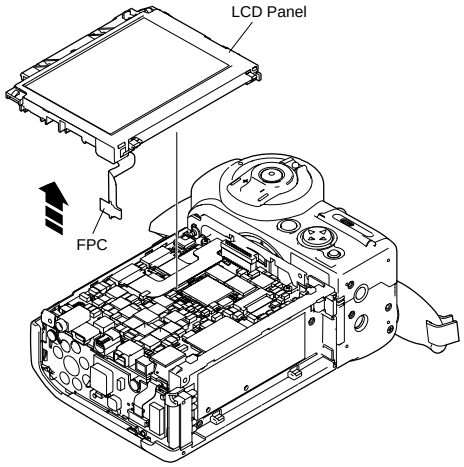
1) Detach the battery unit.
2) Remove the three screws ((d)XiPSN17P03000).
3) Remove the one screw ((c)LX-HZ0050TAFN).
4) Detach the LCD cabinet in the direction of the arrow.

2.



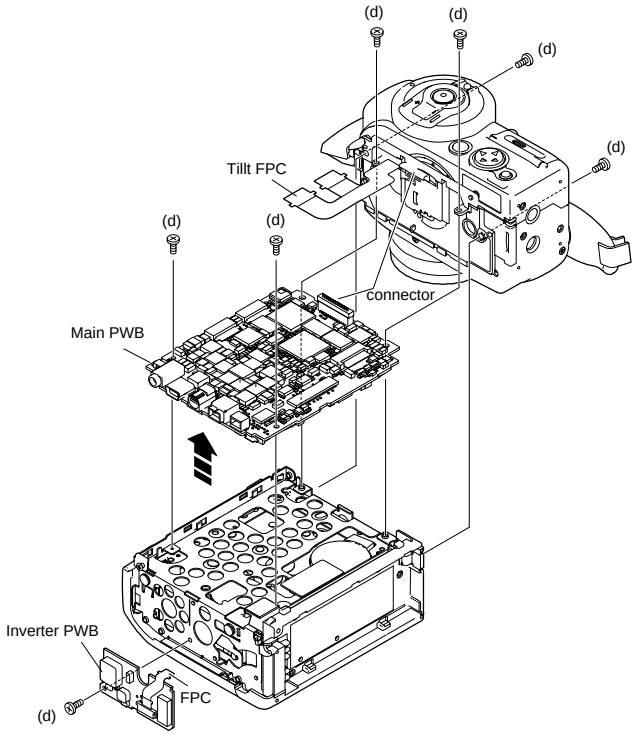
1) Remove the two screws ((d)XiPSN17P03000).
2) Disconnect the speaker wire connector.
3) Detach the side cover in the direction of the arrow.

3.



1) Remove the FPC of the LCD panel, and detach the LCD panel in the direction of the arrow.

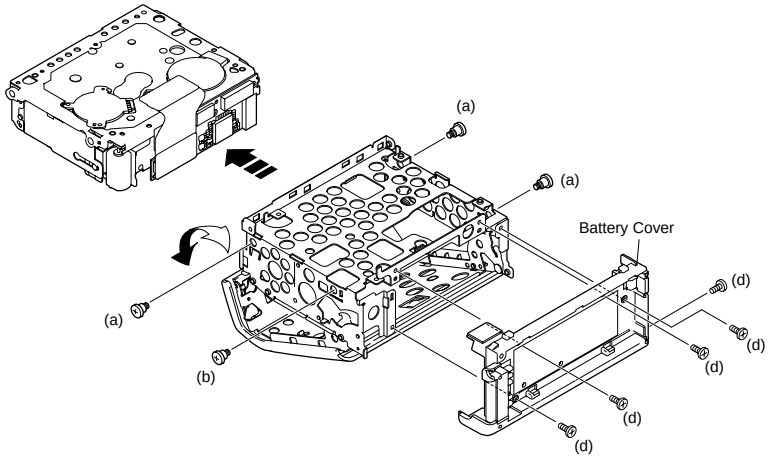
4.



1) Remove the four screws ((d)XiPSN17P03000), the tilt FPC and the tilt wire connector to detach the lens section.
2) Remove the two screws ((d)XiPSN17P03000) to detach the main PWB.
3) Remove the one screw ((d)XiPSN17P03000) and the FPC to detach the inverter PWB.

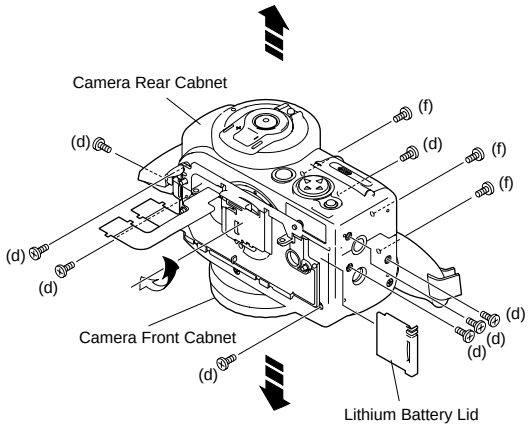
5.

1) Take out the mechanism in the direction of the arrow.
2) Remove the three floating screws ((a)LX-BZ0251TAFD) and the one floating screw ((b)LX-BZ0253TAFN).
3) Remove the five screws ((d)XiPSN17P03000) to detach the battery cover.



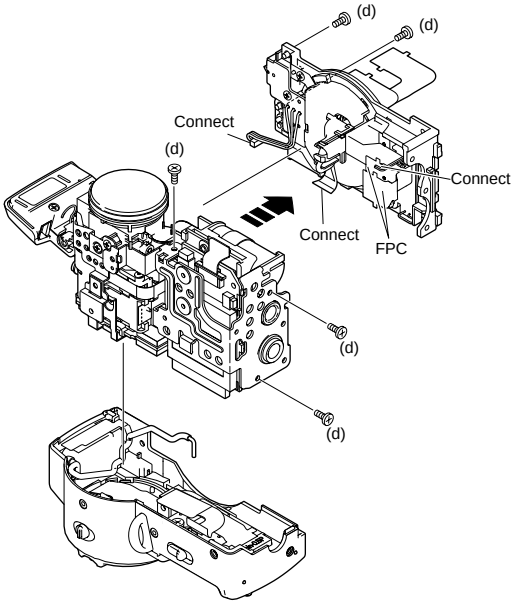
6.

1) Detach the lithium battery lid.
2) Turn the tilt section in the direction of the arrow, and remove the five screws ((d)XiPSN17P03000) and the three screws ((f)XiPSN17P04000) which fix the camera front cabinet. Then detach the camera front cabinet in the direction of the arrow.
3) Remove the three screws ((d)XiPSN17P03000) fixing the camera rear cabinet and the one screw ((d)XiPSN17P03000) fixing the hand strap fitting.
4) Disconnect the microphone wire connector, and detach the camera rear cabinet in the direction of the arrow.



7.

1) Remove the three screws ((d)XiPSN17P03000) to detach the angle.
2) Remove the two screws ((d)XiPSN17P03000), the three connectors and the two FPCs, and detach the tilt section in the direction of the arrow.

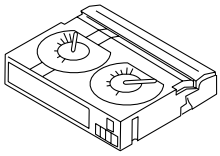
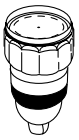
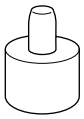
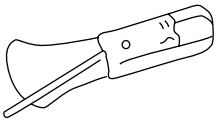
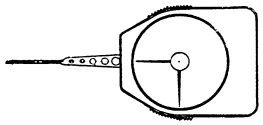
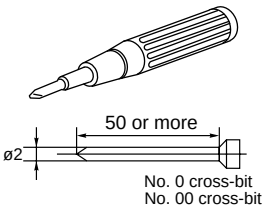
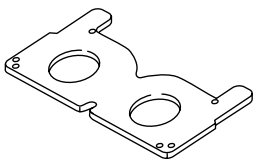
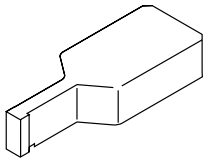
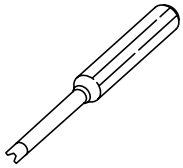
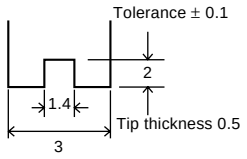
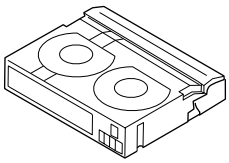
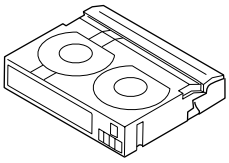
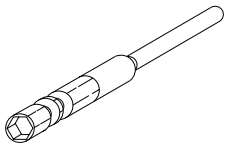


5. MECHANISM ADJUSTMENT JIGS AND PARTS

5-1. Mechanism check adjustment jigs

Configuration
1. Name
2. Part No.
3. Code
* Model, Uses Remarks

<Note: The entries of list>

 1. PB-use cassette Torque meter 2. 9DASD-1015 3. DB * 1mN·m/1.5mN·m	 1. Torque gauge 2. JiGTG0045 3. CN * For use in VS-REW winding torque measurement.	 1. Torque gauge head 2. 9EQTGH-DH5000 3. BW * For use with the torque gauge listed left.	 1. Tension gauge 4N 2. JiGSG0400 3. BK * For measurement of pinch roller pressure.	 1. Dial tension gauge 2. 9DAPTG-10-10W 3. CA * PTG-10
 1. Torque screwdriver 150mN·m 2. JiGTD1500RTDH 3. CB	 1. Master plane 2. 9EQMP-VLPD1 3. CL * For checking reel base height.	 1. Height adjustment jig 2. 9DAHG-PD1 3. BZ * For height adjusting.	 1. Height adjustment screwdriver 2. 9EQDRiVER-DH5 3. BC * For guide roller adjustment.	* For Tu guide adjustment. * For T roller adjustment. * Bit shape (see figure below). 
 1. Alignment tape – (I) 2. VR3-GAZXS 3. CF * For tape running adjustment.	 1. Alignment tape – (II) 2. VR3-GTZQS 3. CG * For SW point adjustment. * 90ADVC-TAPE can use, too.	 1. For hexagon nut opposite side 3mm bit. 2. 95CM22001 3. BL * For S guide hexagon nut installation.	<Miscellaneous> (1) Slide caliper (2) Precision screwdrivers (Phillips head and slotted) (3) Radio needle-nose pliers (4) Tweezers	

Configuration
1. Name
2. Part No.
3. Code
* Model, Uses Remarks

5-2. Parts for regular periodic inspection and maintenance

<Note: The entries of list>

1. Oil Cosmo Hydro HV22 2. 9EQ-Oil-HV22 3. AE * Cosmo Petroleum K.K.	1. Cleaning paper 2. JiGDUSPER 3. AP * DUSPER ∑ (SIGMA) (Ozu Co., LTD.)	1. Grease: Moly Coat YM-103 2. 99FGREASE-YM103 * Dow corning	1. Cleaning liquid: Industrial-use ethyl alcohol * Commercially available item
		1. Screw lock (1401B) * Three Bond	1. Extremely thin cotton swab * Commercially available item

<How to make jigs for mechanism checking and adjustment>

(1) Reel hub for back tension measurement (Fig. 1)
   1) Obtain a commercially available cassette tape reel hub. (Disassemble the cassette tape and remove the tape from the reel hub.)
   2) Paste one end of a string (about 20cm long) to the reel hub with (for example) cellophane tape.
   3) Paste the weight of about 0.21N on the upper side reel hub.

(2) String for use in pinch roller snap-fit force measurement (Fig. 2)
   1) Obtain an approximately 20cm length of commercially available string.
   2) Tie the 2 ends together to form a loop.

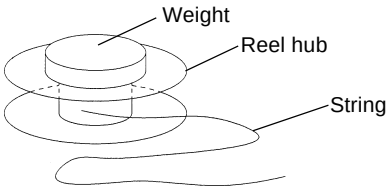


Fig. 1

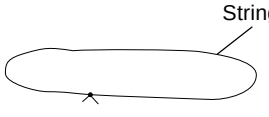


Fig. 2

6. INSPECTION AND MAINTENANCE ITEMS AND INTERVALS

In order to keep the mechanical section always in good condition, perform the following inspection and maintenance at regular intervals. In addition, after repair, perform the following maintenance items regardless of how long the user has been using the unit.

6-1. List of inspection and maintenance items

○ • • • Replace. □ • • • Clean. △ • • • Lubricate. ★ • • • Check.

	Inspection and maintenance location	Time of use (h) 500	1,000	1,500	2,000	3,000	Symptoms that indicate need for maintenance	Remarks
Tape running system	Tape running section (see section 8-3)	□	□	□	□	□	• Block-type noise • Head hole clogging • Tape damage	**Note:** Replace the drum ass'y if the video head is cleaned but the envelope still does not appear. (When the envelope is normal, refer to "11. USEFUL TIPS".)
	Drum section, Video head (see section 8-3)	□	□	□	□	□		
		<Rollers> • Replace if there is anything abnormal in the rotation, or if there is run-out (that becomes large). <Other than the above> • Clean the section that contacts the tape (especially the lower drum helical section). Use the specified cleaning liquid.						
Drive system	Timing belt	—	★○	—	★○	★○	• The tape fails to run. • The tape becomes slack. • Block-type noise • Abnormal noise	• Replace if there is anything abnormal.
	Pinch roller	□	□	□	□○	□		
	Capstan motor	—	○	—	○	○		
	Swing arm S reel base, Tu reel base	—	★○	—	★○	★○		
	Center pulley shaft Intermediate pulley shaft Swing arm boss Intermediate gear A shaft, Intermediate gear B shaft	—	△	—	△	△	• Abnormal noise	• Lubricate with oil. [Oil] Cosmo Hydro HV22 **Note:** Apply oil to the shaft, then wipe lightly with a cloth.
	Loading motor Mode switch	—	★○	—	★○	★○	• Cannot eject. • Fails to enter a mode.	• Replace if anything is abnormal (including the noise).
Performance checks	Abnormal noise	★	★	★	★	★	• The tape fails to run. • The tape becomes slack. • Tape damage • The play-back image is abnormal.	• Replace any part that fails to perform within the standard.
	PB · VS/R winding torque	—	★	—	★	★		
	PB · VS/R · loading back tension Tu reel base ratchet torque S reel base no-load torque	—	★	—	★	★		

[Oil] Cosmo Hydro HV22 [Screw lock] Three Bond 1401B
[Grease] Moly Coat YM-103 [Cleaning liquid] Industrial-use ethyl alcohol

6-2. Precautions

(1) When replacing any part, always replace the cut washer that was removed with a new one.
(2) This mechanism does not have control adjustment. If the control cannot be set as required, clean and or replace parts.
(3) On the oil
  a) Always use the specified oil. (Using another kind of oil can cause various kinds of trouble.)
  b) Always use clean oil, without any mixed-in dirt, to lubricate bearings. (Using oil with dirt mixed in can cause the bearings to wear or to stick.)
  c) One drop of oil is the amount shown in the Fig. 1, on the point of a pin.
(4) Perform circuit repair, tape running adjustment, etc. with the cassette controller assembly attached to the mechanism.
(5) When operating the mechanism separately, apply voltage to the loading motor. However, the terminal voltage must be DC3V~4V.
  (When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause a trouble.)
  (Forcing the gears to turn by hand entails danger of breakage.)
  If the mechanism is separated from the unit, the capstan motor may rub and be damaged if spacing under the mechanism is inadequate.
(6) To install the cassette controller, push section A in the Fig. 2. Do not push anything else.
(7) Do not deform any of the mechanical parts.

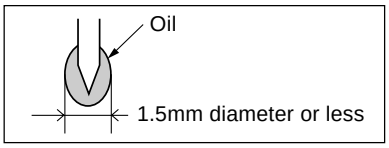


Fig. 1

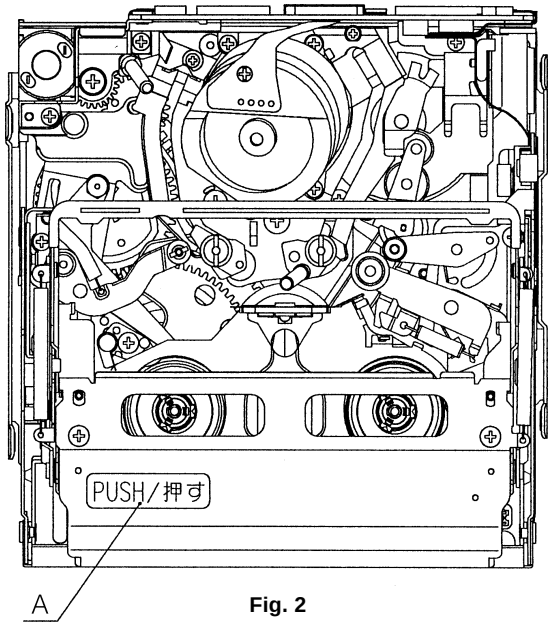


Fig. 2

7. MECHANICAL ADJUSTMENTS AND CHECKS

The items discussed here relate to general on-site servicing (field servicing). Adjustments and replacements that require sophisticated facilities, jigs and technology are omitted.
In addition, in order to maintain the characteristics that the unit has when it is new, not only are inspection and maintenance necessary, but it is absolutely necessary that, for example, the tape not be damaged, and always use jigs for adjustments that require them.

<Precautions>
(1) Always set the power supply and state of the unit as follows Notes for mechanism adjustments and checks.
- AC adapter used, with cassette controller assembly
- AC adapter used, without cassette controller assembly (Independent Mechanism)
- DC3V, without cassette controller assembly (Independent Mechanism)

(2) When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause a trouble.
(3) Always run the tape with the cassette controller assembly attached.

7-1. Checking the playback (recording) winding torque

AC adapter used, with cassette controller assembly

(1) Set the torque cassette with the cassette controller assembly attached, then, in SP recording mode (playback mode if a signal has already been recorded in SP mode on the tape), confirm that the torque on the winding side is within the standard.
<Winding torque standard in record (playback) mode>
(If there is torque ripple, read the center value.)
0.70 +0.4/-0.3mN·m, ripple 0.4mN·m or less

7-2. Checking the rewinding playback (VS-REW) winding torque

AC adapter used, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, press the DOWN switch, using the adhesive tape and referring to 9-3, operate in the TEST mode (T01) to rewind, and set the rewinding playback (VS-REW) mode.
(2) Set the torque gauge on the S reel base, press the front end of tension post with your finger in the arrow A direction so as to ascertain that the winding torque is as specified. (Check without rotating the torque gauge.)
<Rewinding playback (VS-REW) winding torque standard>
(If torque ripple exists, read its center value.)
1.6 ± 0.6mN·m, ripple 0.5mN·m or less
(3) After checking the winding torque remove the torque gauge, and remove the adhesive tape used in item (1) above (refer to 9-3). The STANDBY mode is set automatically.

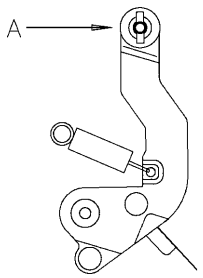


Fig. 1. Removal of tension band when measuring the rewinding playback (VS-REW) winding torque

7-3. Checking of reel base height

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly (refer to 9-2).
(2) Referring to 9-1, apply DC3V to the loading motor and put the system into playback mode.
(3) Taking adequate care so that the master plane does not contact drum, running parts (guide roller, etc.), or the MIC contacts. Fit the master plane holes to the 2 guides (A and B) in Fig. 2.
(4) Confirm that the heights of the S reel base reel receiving surface and the Tu reel base reel receiving surface below the master plane top surface are within the set values, using, for example, a slide calliper (Fig. 3).
When checking the S reel base height, press the front end of tension post in the arrow A direction with your finger to release the tension band, and then check the height in this state (Fig. 1).
(5) If the height is not within set values, replace the washer under the reel base, and adjust as specified.
Note: After the adjustment, make sure that the reel bases rotate smoothly.

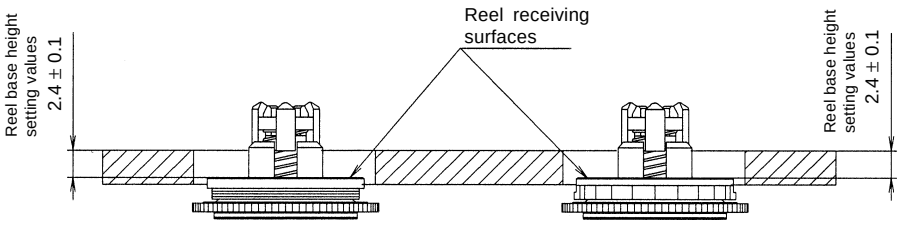


Fig. 3

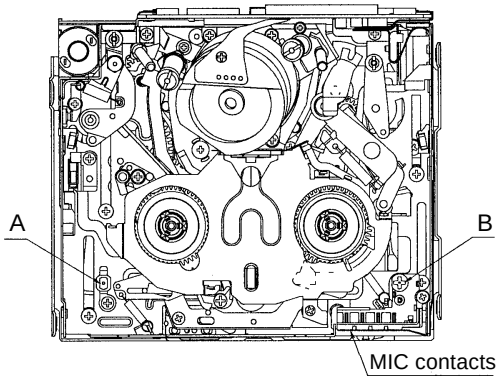


Fig. 2

7-4. Back tension torque check and adjustment in record (playback) mode

AC adapter used, with cassette controller assembly

(1) Checking

Set the torque cassette (SD-1015), and make sure in the SP record mode that the supply side torque is within the standard shown below (or in the playback mode for the tape on which the signal has been SP-recorded).

<Standard>

(If torque ripple exists, read its center value.)

0.7 ± 0.1mN·m

(2) Adjustment (Fig. 4)

If the value is out of standard range, adjust, using the screw 1 shown in Fig. 4.

1. Loosen the screw 2 slightly.
2. Adjust to turning the screw 1. When back tension is too high, turn the screw 1 counterclockwise (CCW).
   When back tension is too low, turn the screw 1 clockwise (CW).
3. After adjustment fix the angle with the screw 2. (At this time take care so as to prevent excessive tightening.) Apply Screw Lock to the screw 1.

<Caution>

Screw tightening torque: 0.04N·m

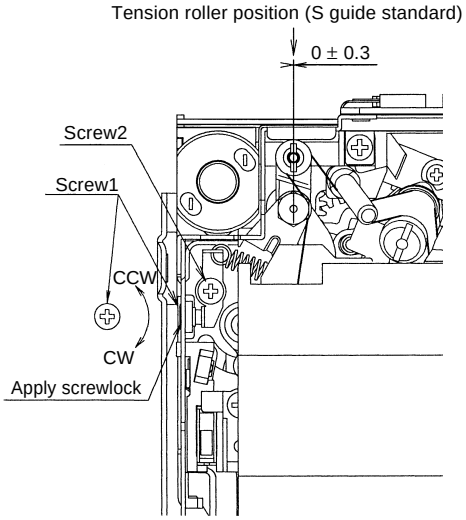


Fig. 4. Check (tape exists)

7-5. Checking and adjustment of tension roller position in record (playback) mode

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Checking

Before winding the 60-min tape make sure that the tension roller is in the same position as S guide as shown in Fig. 4.

If not, take out the tape and adjust in the following procedure.

(2) Adjustment (Fig. 5)

1. Set the playback mode without loading the tape.
2. Loosen the screw 3 slightly (to such an extent that the tension band holder 4 can be moved).
3. If the tension roller is inside from the specified position, shift the tension band holder 4 in the arrow Ⓐ direction. If the tension roller is outside, shift the tension band holder in the arrow Ⓑ direction, and fix with the screw 3. (Proper shift must be 0.2 to 0.6mm outside from the specified position.)
4. Check the position by the procedure described in item (1) Checking above.
5. If the position is not specified position, adjust again.

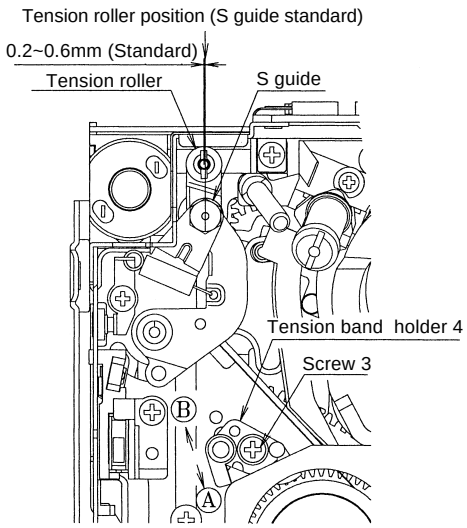


Fig. 5. Position adjustment (tape does not exist)

7-6. Checking of supply S reel base no-load torque

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into L. start mode (refer to 9-1).

(2) Move the swing arm toward the Tu reel base side.
Be careful not to cause damage to the gears and other parts in the process. (Fig. 6)

(3) Set a back tension measurement reel hub on the S reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

<FF back tension standard>

(If the tension fluctuates, read its center value.)

30mN or less

7-7. Checking of loading back tension

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into L. start mode. (refer to 9-1)

(2) Move the swing arm toward the S reel base side. Be careful not to cause damage to the gears and other parts in the process. (Fig. 7)

(3) Set a back tension measurement reel hub on the Tu reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

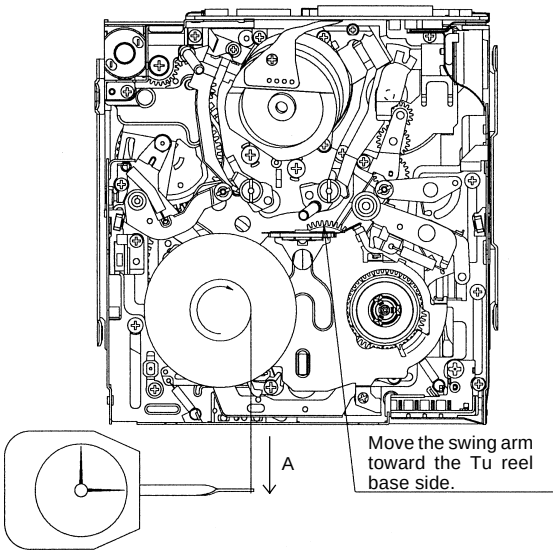


Fig. 6. S reel base no-load torque measurement method

<REW back tension standard>

(If the tension fluctuates, read its center value.)

15 ± 12mN

7-8. Checking of winding Tu reel base ratchet torque

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into standby mode. (refer to 9-1)

(2) Move the swing arm toward the S reel base side.
Be careful not to cause damage to the gears and other parts in the process. (Fig. 8)

(3) Set a back tension measurement reel hub on the Tu reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

<Winding Tu reel base ratchet torque standard >

(If the tension fluctuates, read its center value.)

100mN or less

7-9. Checking of rewinding playback (VS-REW) back tension

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into rewinding playback (VS-REW) mode. (refer to 9-1)

(2) Move the swing arm toward the S reel base side.
Be careful not to cause damage to the gears and other parts in the process.

(3) Set a torque gauge on the Tu reel base.

(4) Turning the torque gauge to counterclockwise (1 turn for 3 seconds), then confirm that the torque is within the standard.

<Rewinding playback (VS-REW) back tension standard value>

(If the tension fluctuates, read its center value.)

0.70 +0.6/-0.3mN·m

7-10. Checking of pinch pressing force

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Set the pinch roller pressing force measuring thread on the pinch lever (position A , Fig. 9).

(2) Set the mechanism to the playback mode, press the pinch roller against the capstan shaft.

(3) Fit the tension gauge to the pinch roller pressing force measuring thread, pull in the arrow B direction shown in Fig. 11 to separate a little the pinch roller from the capstan shaft.

(4) Gradually return the pinch roller, and when the pinch roller contacts parallel the capstan shaft, read the value (see Fig. 10) to make sure that the value conforms to the standard shown below.

<Standard>

1.8 +0.3/-0.5N

<Caution>

After making this measurement, quickly release the system from playback mode and remove the pinch roller from the capstan shaft. (If the pinch roller is left fitted onto the capstan shaft for a long time, the pinch roller will be deformed.)

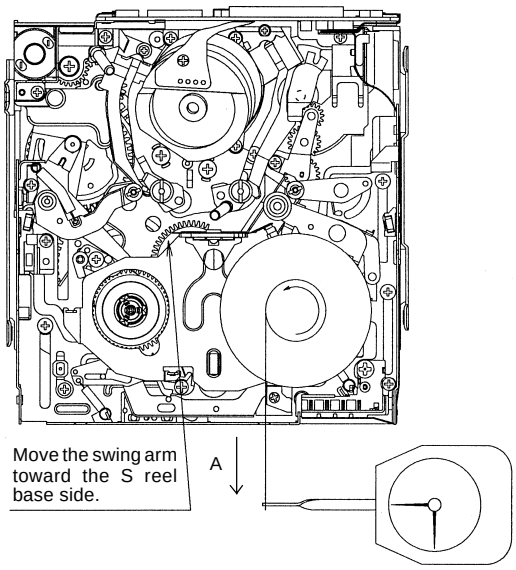


Fig. 7. Loading back tension measurement method

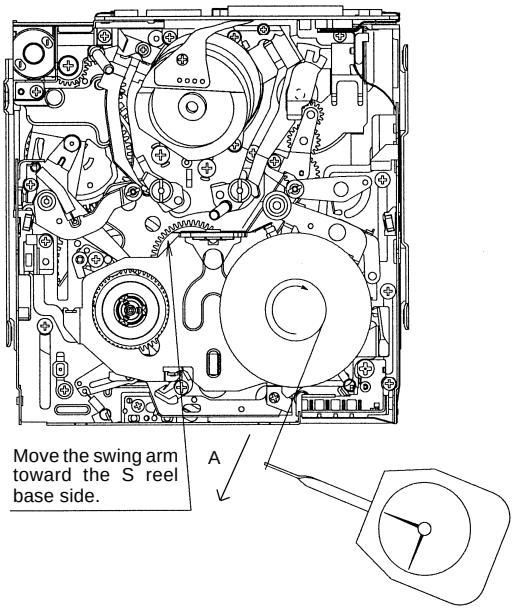


Fig. 8. Winding Tu reel base ratchet torque measurement method

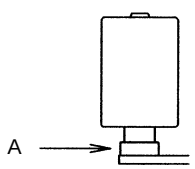


Fig. 9

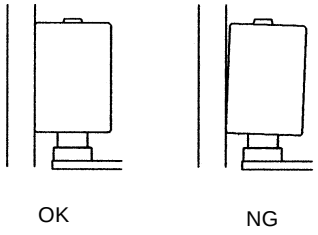


Fig. 10

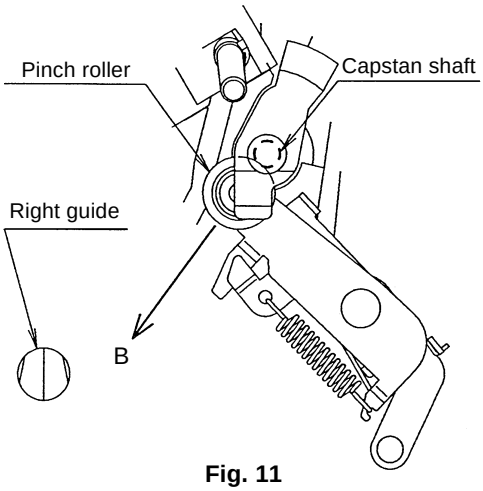


Fig. 11

8. TAPE RUNNING ADJUSTMENT

8-1. Adjustment locations

<Replacement parts>
· T roller, arm
· Tu guide, arm
· Slide chassis

→ Adjust the height of only replaced parts with the adjusting jig. Adjustment procedure 8-2

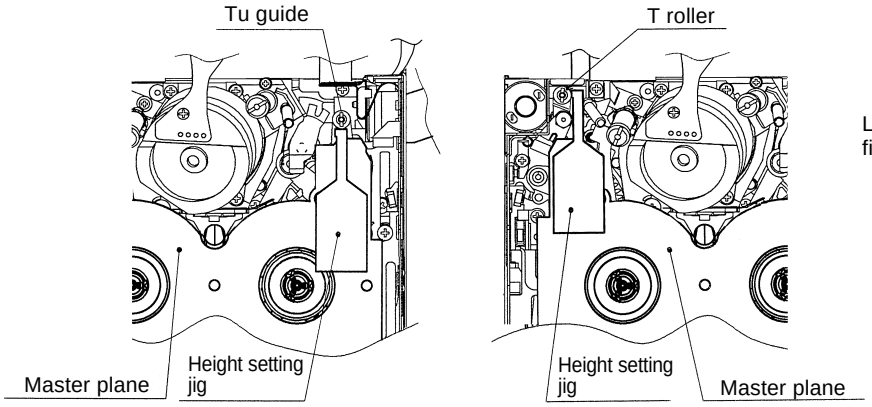
<Replacement parts other than those shown above>
· S guide
· Pole base
· Guide roller
· Drum assembly
· Capstan motor, etc.

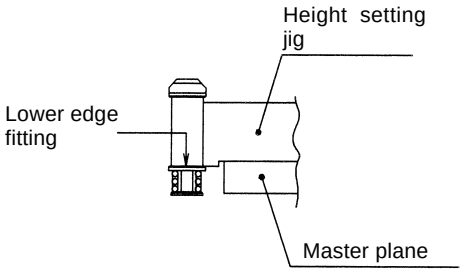
→ Height presetting is not necessary.

→ Cassette controller installation → Running adjustment preparation Adjustment procedure 8-3 → Running rough adjustment Adjustment procedure 8-4 → Running final adjustment Adjustment procedure 8-5

8-2. Running height adjustment

· After replacement of T roller or Tu guide adjust the height . (Adjust only the replaced parts.)
· After height adjustment do not turn the T roller. If crease is found on the tape of Tu guide, remove the crease by rotating. (As for details refer to the “Running rough adjustment”.)
· After height adjustment of T roller or Tu guide, apply Screw lock to an end of shaft. (After replacement of S guide apply Screw lock to same point, too.)





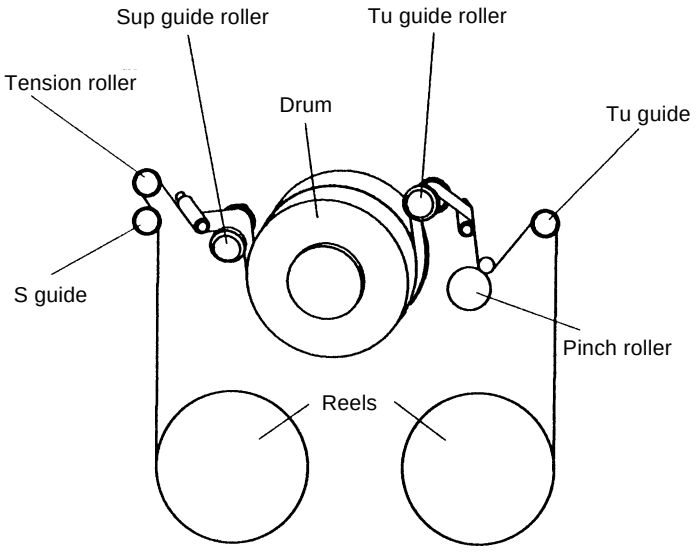
Fit height the par on low edge fitting.
After setting adjustment jigs, turn T roller counterclockwise to 315°.

8-3. Preparation for tape running adjustment

Meters, jig… Oscilloscope, Adjustment remote control, Height adjustment screw driver, Alignment tape (for tape running adjustment, for switch point adjustment), Master plane, Height adjustment jig.

<Method and description>

(1) Clean the tape running surface (especially, adequately clean the drum surface and the lower drum helicam surface).
(2) Attach the cassette controller.
(3) Connect an oscilloscope to each TP on the relay circuit board.
(4) Turn the AC adapter power ON.
(5) Using the adjustment remote control unit, put the system TEST mode T-05.
(6) Replay the alignment tape for running adjustment, and make sure that the tape is running in the SP mode.
(7) Check the oscilloscope playback envelope, then, at +1/4 shift and -1/4 shift, check whether all of it is flat. If it is not, perform the following adjustment so that it becomes flat.
(Each time you push the PLAY key, the shift will change; [+1/4 shift] → [Normal] → [-1/4 shift] → [Normal], in order.)



8-4. Running rough adjustment

(With cassette controller)

1) Su, Tu guide roller height adjustment

<Method and description>

(1) Loosen the guide roller lock screw, then tighten loosely so that the roller turns easily.
(2) Replay an alignment tape, and adjust the Sup, Tu guide roller so that the envelope sides of entrance and exit are flat.
(3) Perform ± 1/4 shift, then, as in the above case, adjust until the envelope becomes flat.
* If running is difficult for the entrance changed, turn the T roller to counterclockwise 180°. (refer to Fig. 1)

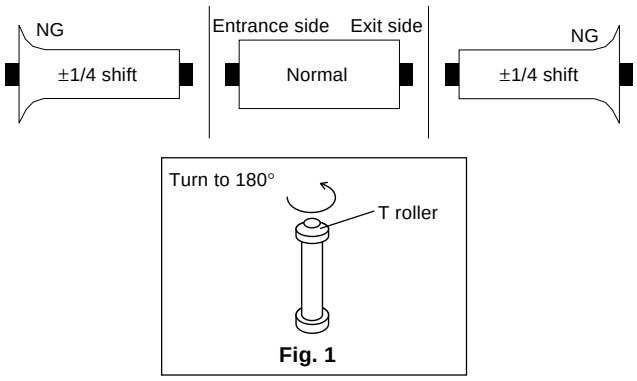
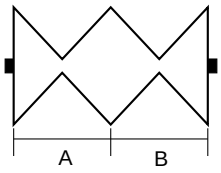


Fig. 1

2) Check of V/SR envelope wave form

<Method and description>

(1) Confirm that the envelope waveform peaks in V/SR mode are uniform.
(2) If they are not uniform, fine-adjust the guide roller and the Tu guide.

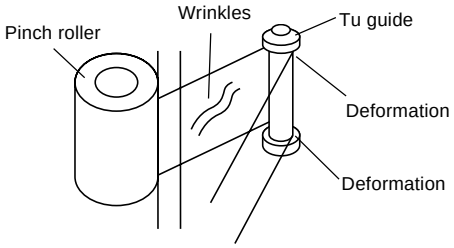


Adjust so that A ≒ B.

3) Check of tape wrinkles

<Method and description>

(1) Check that the tape is not distorted between the Tu guide and pinch in the PB mode and the V/SR mode.
⇨If crease is found, make an adjustment in the range of ±180°.
⇨After adjustment apply Screw Lock.



4) Check the rising time of the envelope wave form

<Method and description>

(1) Check the rising time of the envelope when switching from V/SR mode to PB mode. (Within 5 sec)
(2) Check the rising time of the envelope when switching from STOP mode to PB mode. (Within 5 sec)

8-5. Final running adjustment

(With cassette controller)

1) Adjustment of Sup and Tu guide roller height

<Method and description>

(1) Perform ± 1/4 shift, then if the envelope wave's ratio of MAX. to MIN. are 60% or less, adjust again the height of guide roller. (Refer to Fig. 2)
(2) Finally adjust the lock screw of Sup and Tu guide roller.
(3) Once perform unloading and then loading to set the PB mode, and make sure that the envelope waveform does not change.

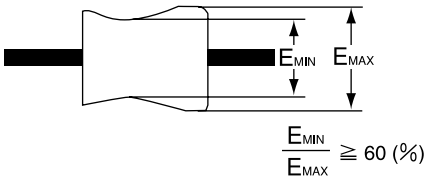


Fig. 2

2) Adjustment of playback SWP

<Method and description>

(1) Playback the alignment tape for switch point adjustment.
(2) Perform SWP automatic adjustment with adjustment remote control.

* When replacing the mechanism and drum, adjust the phase and equalizer using the adjustment remote control. (Refer to "10. ADJUSTING THE ELECTRICAL CIRCUITS".)

9. MECHANICAL SECTION ASSEMBLY AND PARTS REPLACEMENT (DISASSEMBLY AND REASSEMBLY)

Mechanical section disassembly and reassembly are explained in this section.
For removal of the cabinet, etc., refer to **4. DISASSEMBLY OF THE SET.**

<Precautions>

1. Always replace cut washers that have been removed, for example in parts replacement, with new ones.
2. When reassembling, be careful not to allow screws, washers or foreign matter to enter. They can cause mechanical misoperation.
3. Use the cleaning liquid, oil, grease and screw lock that are specified below. Use of any other kind can cause mechanical misoperation.

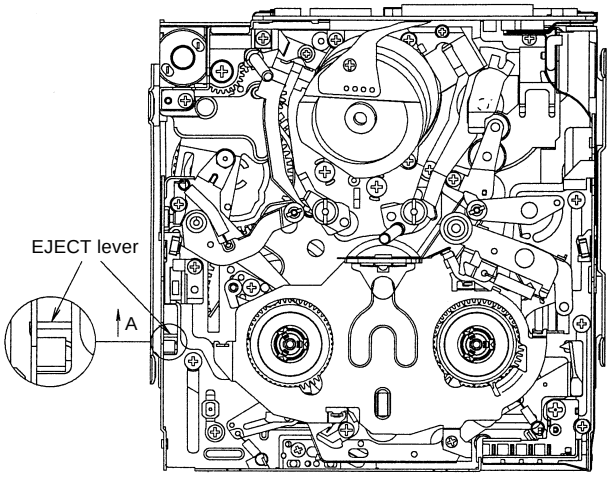
Oil: Cosmo Petroleum : Cosmo Hydro HV22	Screw lock: Three Bond :1401B
Grease: Dow Corning : Moly Coat YM-103	Cleaning liquid: Industrial-use ethyl alcohol

9-1. On the mechanical modes

When operating the mechanism separately, apply DC3~4V to the loading motor.
(When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause operational problems.)

(1) EJECT mode

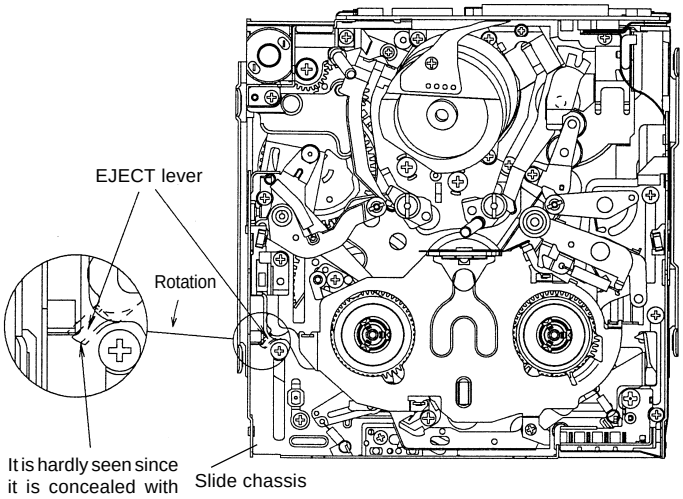
The mechanism position to take out the cassette where the EJECT lever is extremely shifted in the A direction. (It is impossible to lock the cassette controller assembly in this mode.)



EJECT mode diagram

(2) STANDBY mode

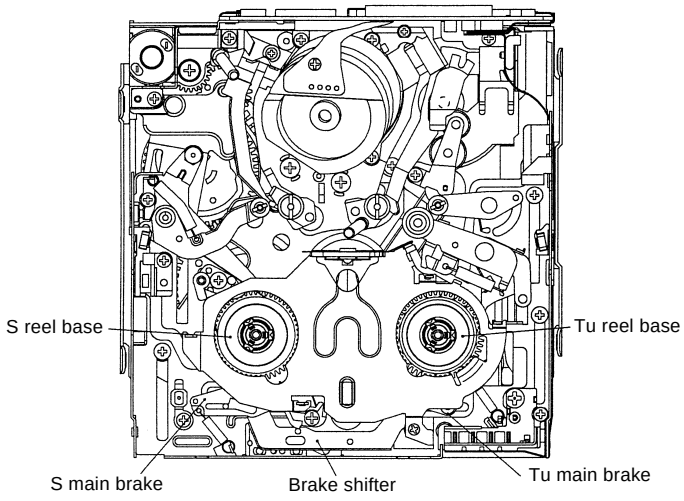
The mechanism position to set the cassette where the slide chassis is at the farthest position from the drum and the EJECT lever is in counterclockwise rotated position (position where the cassette controller assembly can be locked).



STANDBY mode diagram

(3) LOADING START mode

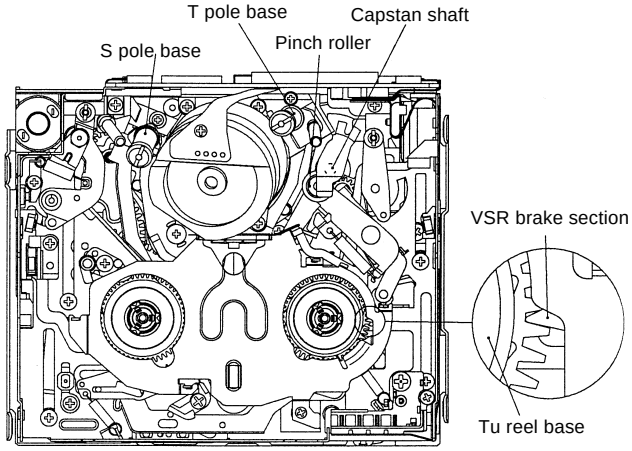
This is the mode where the tape is wound around the winding reel when a cassette with visible wind start leader tape is loaded. (The brake shifter moves to the left, the S main brake is separated from the S reel base and the Tu main brake is separated from the Tu reel base.)



LOADING START mode diagram

(4) REWINDING (VSR) mode

The mechanism position to rewind the tape (fast rewinding playback). The S and T pole base is pressed, the pinch roller is pressed to the capstan shaft, the brake shifter VSR brake section engages with the Tu reel base gear.

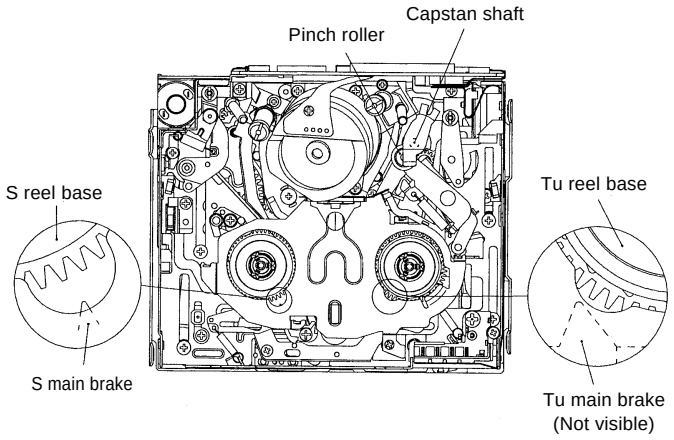


REWINDING (VSR) mode diagram

(5) PLAYBACK (RECORD, FF, VSF) mode

The mechanism position for playback, record, FF and fast feed playback.

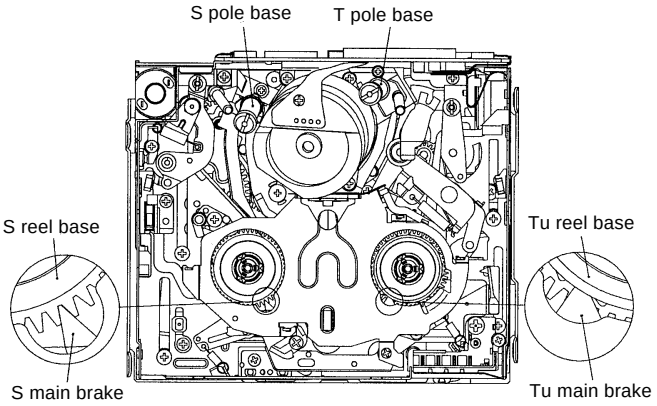
The pinch roller is pressed to the capstan shaft, and the S/Tu main brake is separated from the S/Tu reel base.



PLAYBACK mode diagram (RECORD, FF, VSF)

(6) STOP mode

The system is in the STOP (Rec Lock in CAMERA mode) position; the S and the T pole bases are snap-fitted to the drum base, the S brake is in contact with the S reel base, and the Tu brake is in contact with the Tu reel base.



STOP mode diagram

9-2. Cassette controller assembly

<Removing>

(1) Apply DC3V to the loading motor to enter the standby mode.
Press the lock lever in the arrow direction to raise the cassette controller. (See Fig. 1; Ⓐ or Ⓑ direction.)

(2) Turn the damper lever in the arrow Ⓒ direction to release the engagement of the damper bar. (See Fig. 2.)

(3) Remove two screws Ⓔ, and remove the down guide Ⓓ in the arrow Ⓕ direction. (See Figs. 3 and 4.)
Take care that the slide chassis is provided with the down guide positioning Ⓖ or Ⓗ.

(4) Slide the cassette controller in the arrow Ⓘ direction, remove the outer link shaft (both sides) toward the inside of the mechanism, and turn the cassette controller in the arrow Ⓙ direction. (See Fig. 5.)

(5) Slide the cassette controller in the arrow Ⓚ direction. (See Fig. 6.)

<Installing>

(1) Apply DC3V to the loading motor to enter the standby mode.

(2) For assembly, reverse the removing procedure (5) thru (2).
Tightening torque of two screws Ⓔ: 40±4mN.m

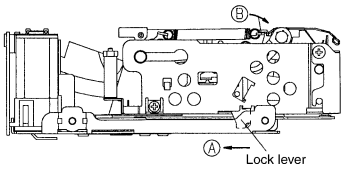


Fig. 1.

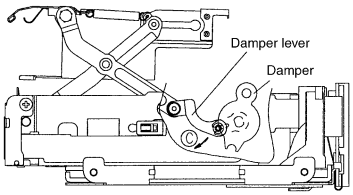


Fig. 2.

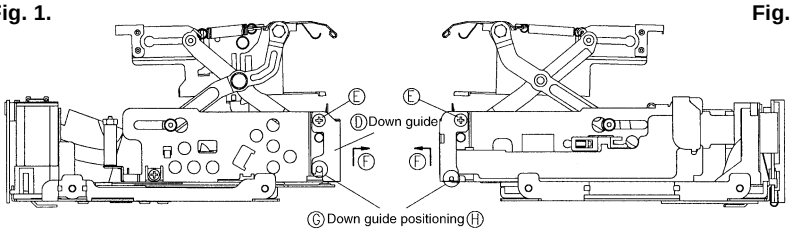


Fig. 3.

Fig. 4.

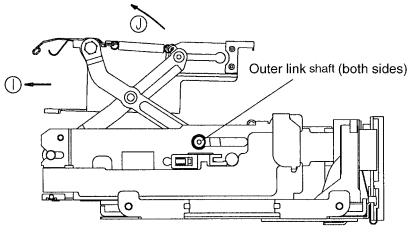


Fig. 5.

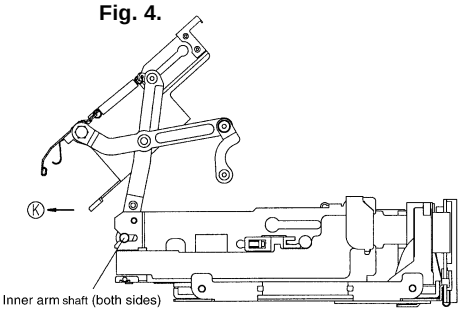


Fig. 6.

9-3. How to operate with the circuit board without the cassette controller assembly.

In this method, if the procedure is followed incorrectly there is danger of damaging the mechanism and the tape, so except in special cases, such as when measuring the VSR torque, do not perform this procedure. Normally operate this unit with the cassette controller assembly attached.
Be sure to follow each caution mentioned.

(1) Apply DC3 ~ 4V to the loading motor to enter the standby mode.
(2) Securely press the movable piece Ⓛ of the down SW with cellophane tape or similar to turn on SW. (Take care that the movable piece turns only in the shown arrow direction.)

Note: To enter REC mode, press the pin of the recognition switch Ⓜ.
(Unnecessary in other modes.)

(3) Set the test mode (T-01) with the adjustment remote controller without putting the tape, and the mechanical operation will become possible with the mode key.
(4) For ejection, remove the tape of (2).

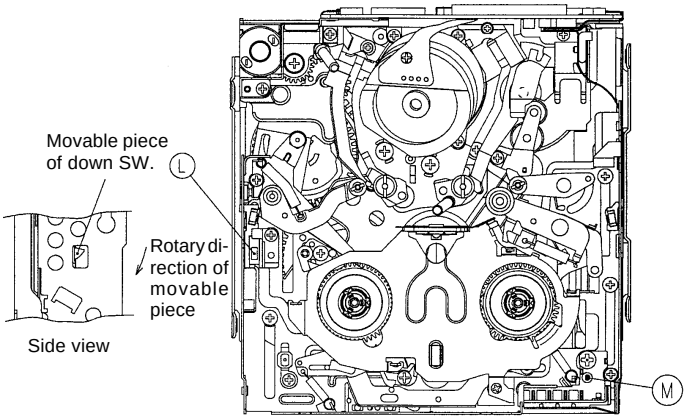


Fig. 7. LOADING START mode

9-4. Phase matching

Referring to Figs. 8 and 9, align the phase for the following parts.
(1) Eject lever (2) Eject control lever (3) Mode SW (4) Main cam (5) Sub cam
Note: Before disassembly, sufficiently check the marker position.
Note: When installing the joining gears, verify that the phase matching holes of the main cam and subcam are aligned to the hole of the chassis.
Note: After the phase is aligned, turn the mode SW with hand, and verify that it turns nearly one turn.
(After verification, return it to the original position.)

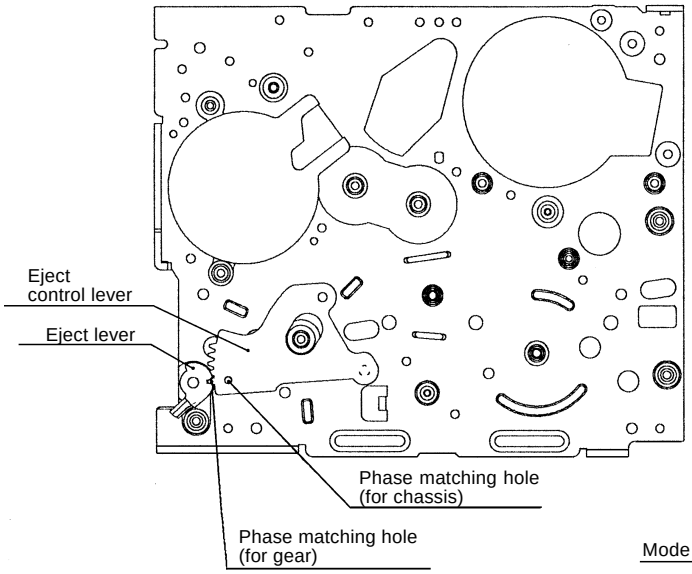


Fig. 8

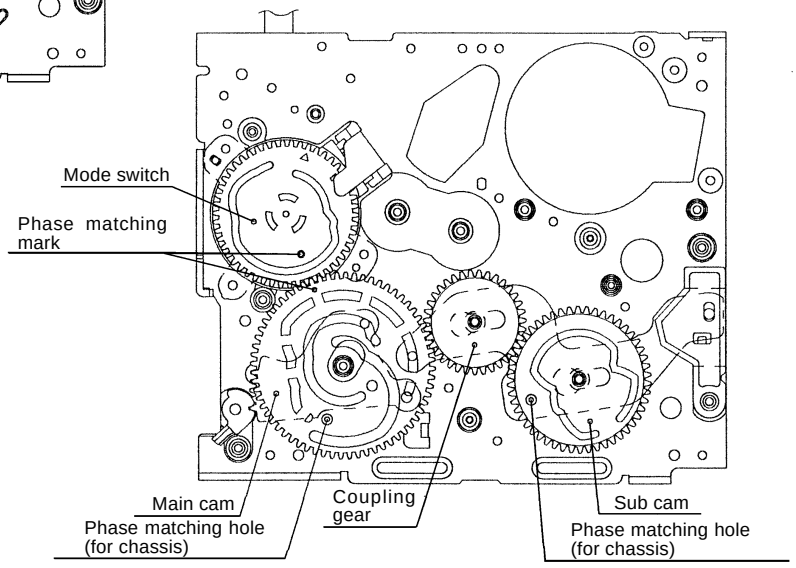


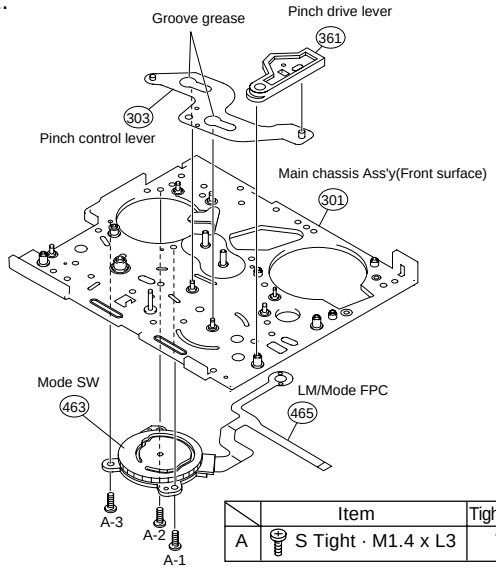
Fig. 9

9-5. Reassembly

9-5-1. Reassembly in side of the main chassis.

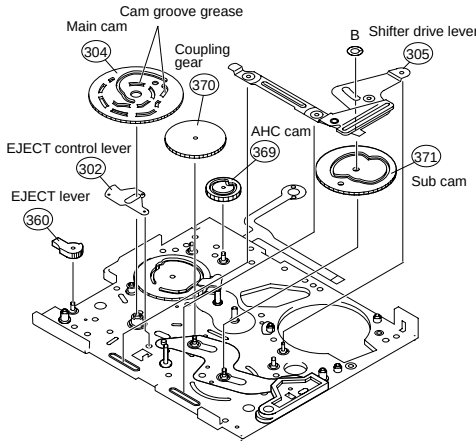
Note) Numbers before part names are given as a guide to the order of assembly.
As for greasing/oiling/cleaning places refer to the attached drawings (Grease/Oil application side of the main chassis).

1.



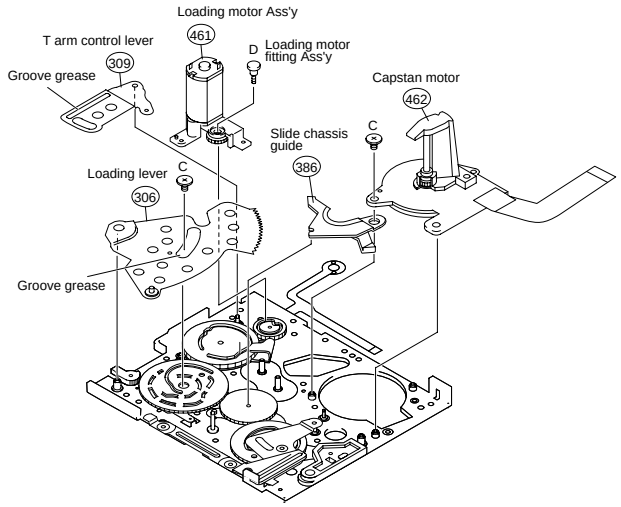
	Item	Tightening torque	Quantity
A	S Tight · M1.4 x L3	70mN·m	3

2.



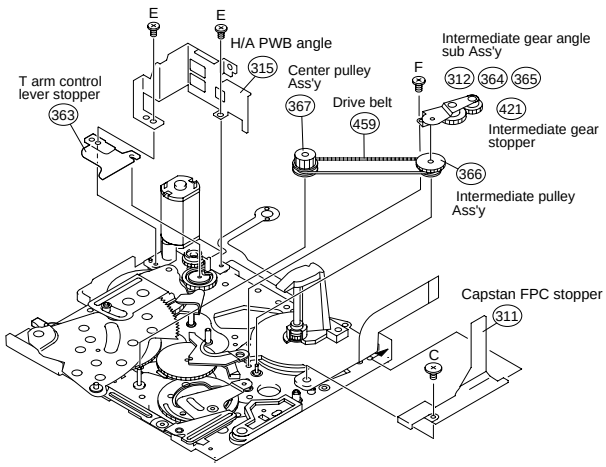
	Item	Tightening torque	Quantity
B	CWø1.2-ø3.0-t0.25	————	1

3.



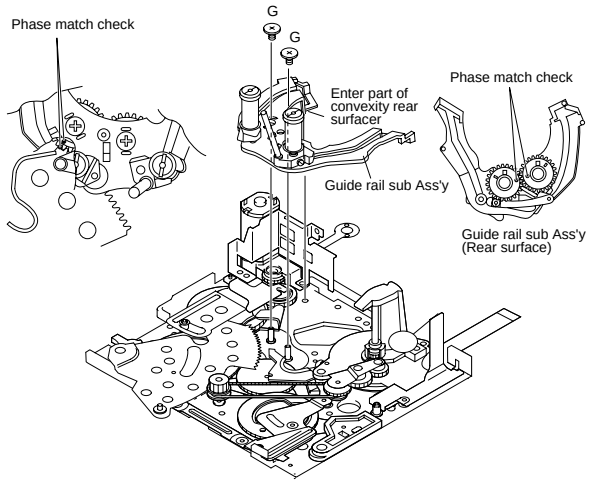
	Item	Tightening torque	Quantity
C	Special screw · M1.4 x L1.6	40mN·m	2
D	Special screw with step· M1.4 x L6.25	70mN·m	1

4.



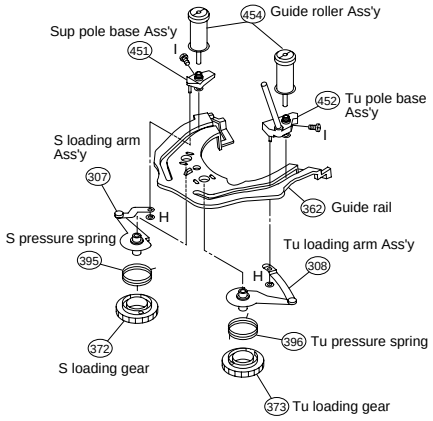
	Item	Tightening torque	Quantity
C	Special screw · M1.4 x L1.6	40mN·m	1
E	S Tight · M1.4 x L4	70mN·m	2
F	S Tight · M1.4 x L2	70mN·m	1

5.



	Item	Tightening torque	Quantity
G	Special head screw · M1.4 x L1.5	40mN·m	2

6.

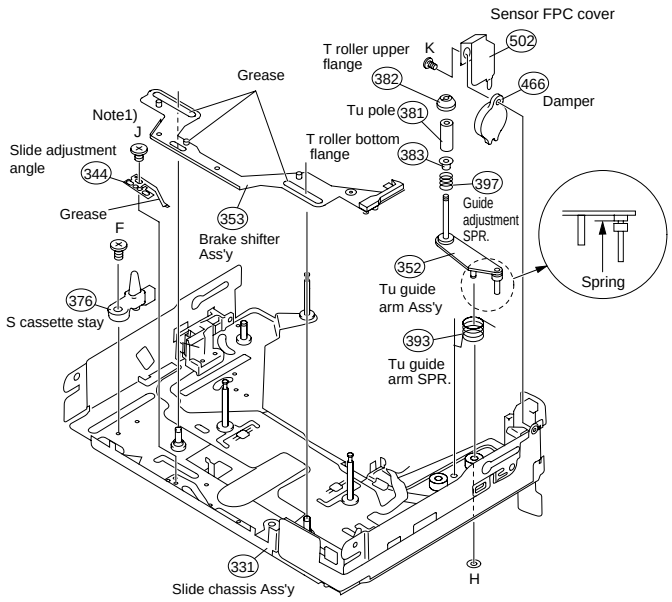


	Item	Tightening torque	Quantity
H	CWø0.7-ø2.2-t0.25	————	2
I	Special screw · M1.2 x L1.8	5mN·m (Tentative tightening)	2

9-5-2. Reassembly in side of the Slide chassis.

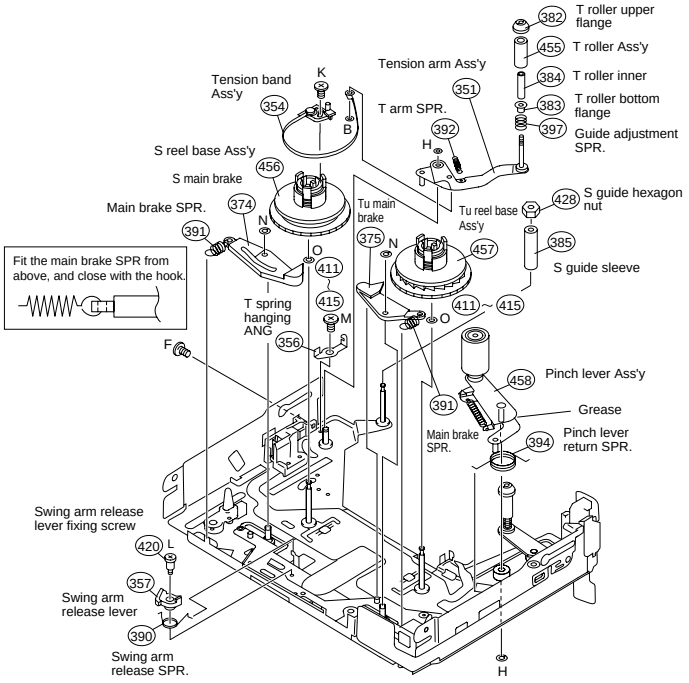
Note) Numbers before part names are given as a guide to the order of assembly.
As for greasing/oiling/cleaning places refer to the attached drawings (Grease/Oil application side of the slide chassis)

1.



	Item	Tightening torque	Quantity
F	S Tight · M1.4 x L2	40mN·m	1
H	CWø0.7-ø2.2-t0.25	———	1
J	Special screw · M1.2 x L1 Note 1: Use the No. 00 bit.	40mN·m	1
K	Special head screw · M1.4 x L2	40mN·m	1

2.



Note 1: Take care for scratch and hit mark on (381), (382), (383), (384) and (455). Handle the tension band with care against deformation.
Note 2: After lightly tightening (428) arm area against deformation, apply screw-lock on the tip of the shaft.

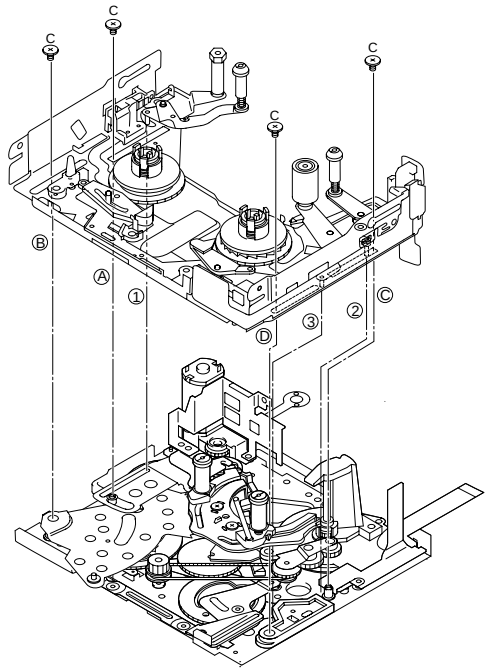
	Item	Tightening torque	Quantity
B	CWø1.2-ø3.0-t0.25	———	1
F	S Tight · M1.4 x L2	40mN·m	1
H	CWø0.7-ø2.2-t0.25	———	2
K	Special head screw · M1.4 x L2	40mN·m	1
L	Special screw with step· M1.4 x L1	40mN·m	1
M	Type 2 minuteness M1.4 x L1	40mN·m	1
N	CWø0.7-ø1.8-t0.1	———	2
O	Wø1.2-ø2.5-t0.3	———	2

9-5-3. Main chassis assembly and slide chassis assembly assembling method

(1) Enter the coupling mode. (In this position, the cam groove of the T arm operation lever in the figure is parallel to the side of the main chassis, and the poll base is slightly moved.)

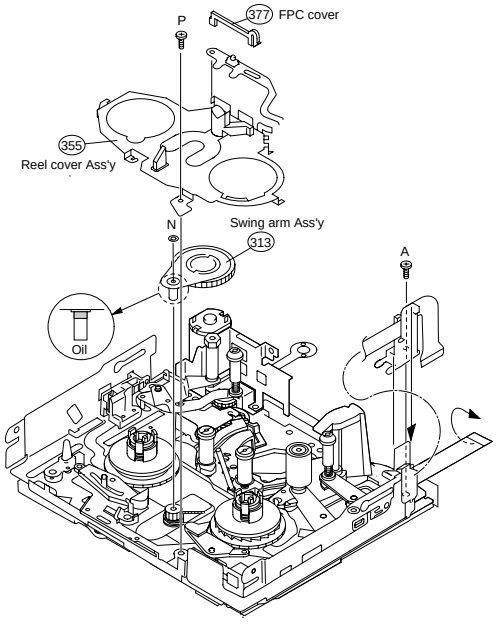
(2) Insert the slide chassis side operation pins (① tension arm, ② Tu guide arm, ③ pinch lever) in the position shown below at the main chassis side, move the slide chassis in the arrow direction, using Ⓐ to Ⓓ as guides, insert the loading lever operation pin into the groove of slide chassis, and install with the 4 screws.

1.



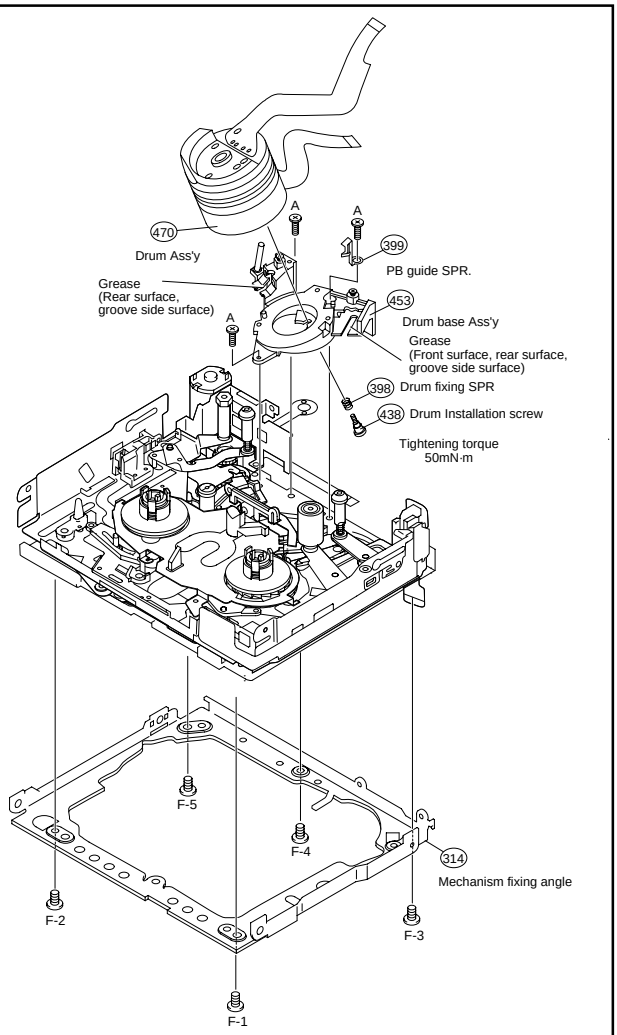
	Item	Tightening torque	Quantity
C	Special screw · M1.4 x L1.6	40mN·m	4

2.



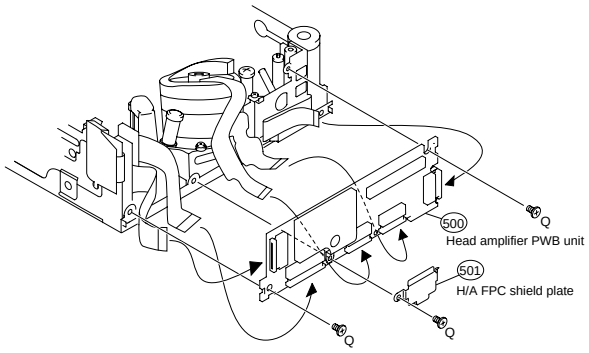
	Item	Tightening torque	Quantity
A	S Tight · M1.4 x L3	40mN·m	1
N	CWø0.7-ø1.8-t0.1	———	1
P	Type 1 minuteness M1.4 x L1	40mN·m	1

3.



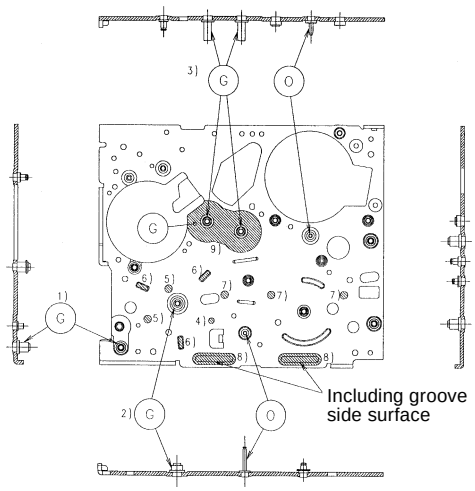
	Item	Tightening torque	Quantity
A	S Tight · M1.4 x L3	70mN·m	3
F	S Tight · M1.4 x L2	70mN·m	5

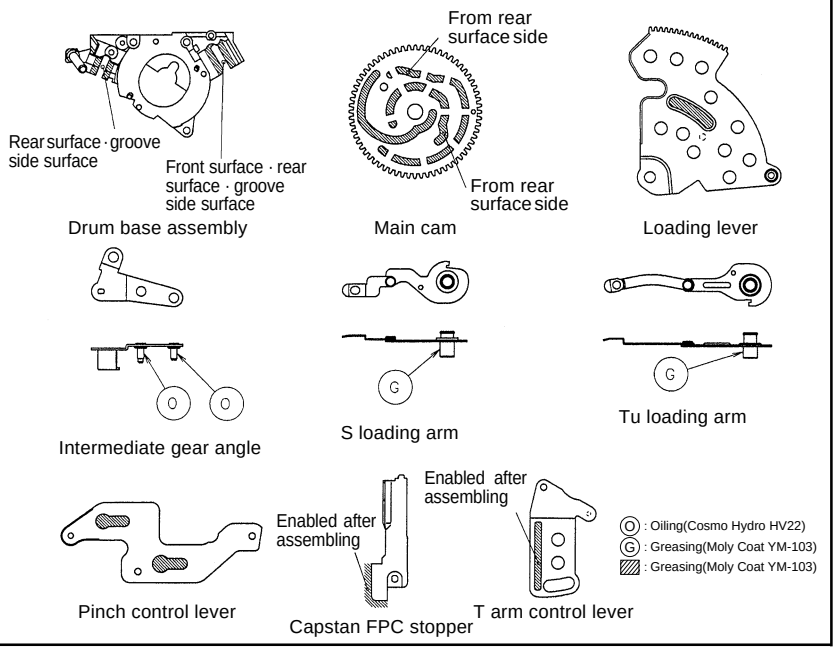
4.



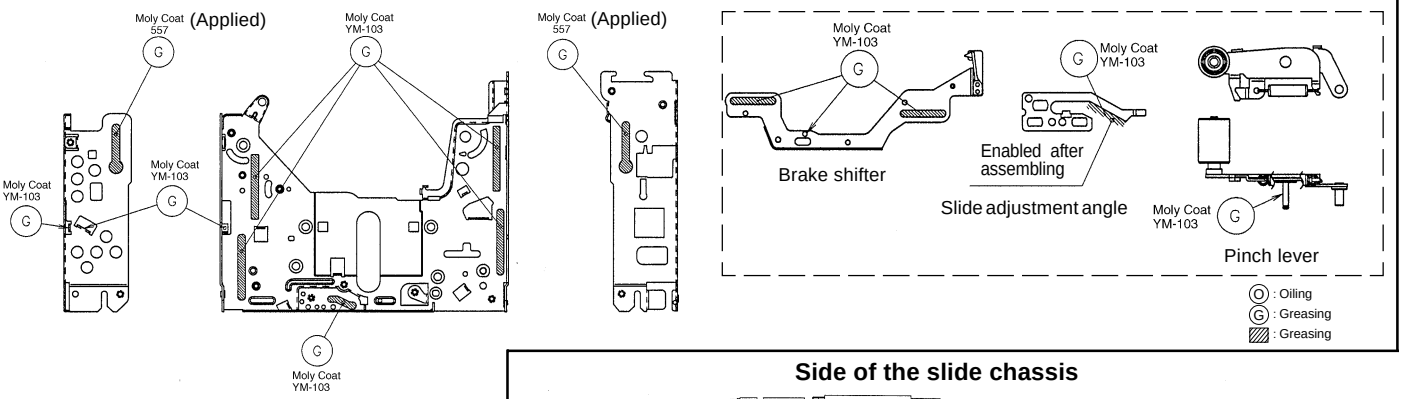
	Item	Tightening torque	Quantity
Q	Type 2 minuteness M1.4 x L2	40mN·m	3

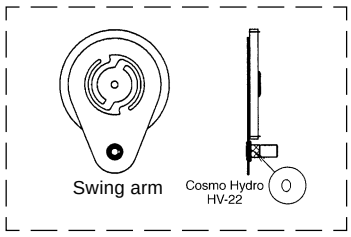
GREASE/OIL APPLICATION





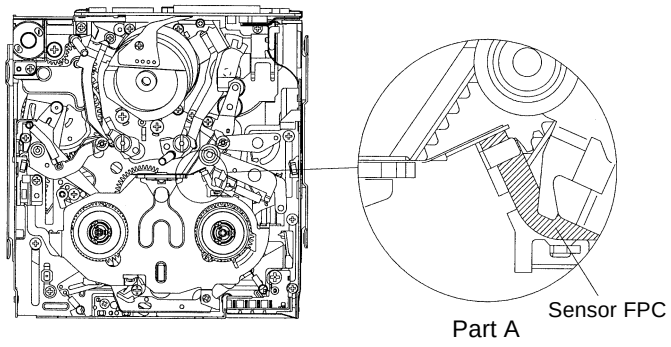
Side of the main chassis





After joining the main chassis and slide chassis

Side of the slide chassis



Sensor FPC wiring

9-6. Removing the cassette

(1) Apply DC3V to the loading motor unload slightly.
(2) After the tape is slackened, turn the rotor (lower side of mechanism) of capstan motor to tighten the tape. (Arrow direction, Fig. 1)
(3) Repeat the operations (1) and (2). After the pole base has been completely unloaded, ascertain that the tape is not loose.
(4) Finally apply again DC3V to the loading motor, so that the cassette controller ejects.
(5) Take out the cassette.

Note) DC3V is applied to the loading motor as shown Fig 1. Then, the mechanism moves in the unloading direction.

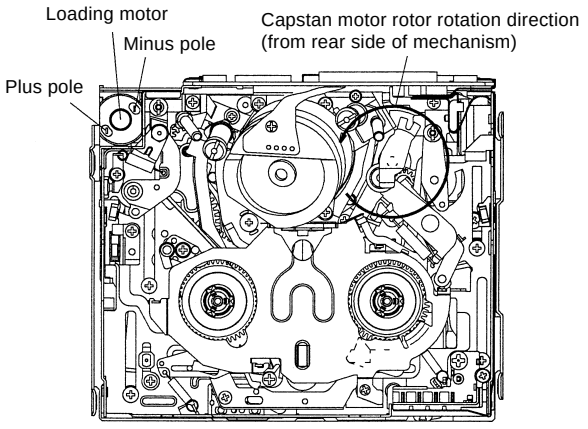


Fig. 1

10. ADJUSTING THE ELECTRICAL CIRCUITS

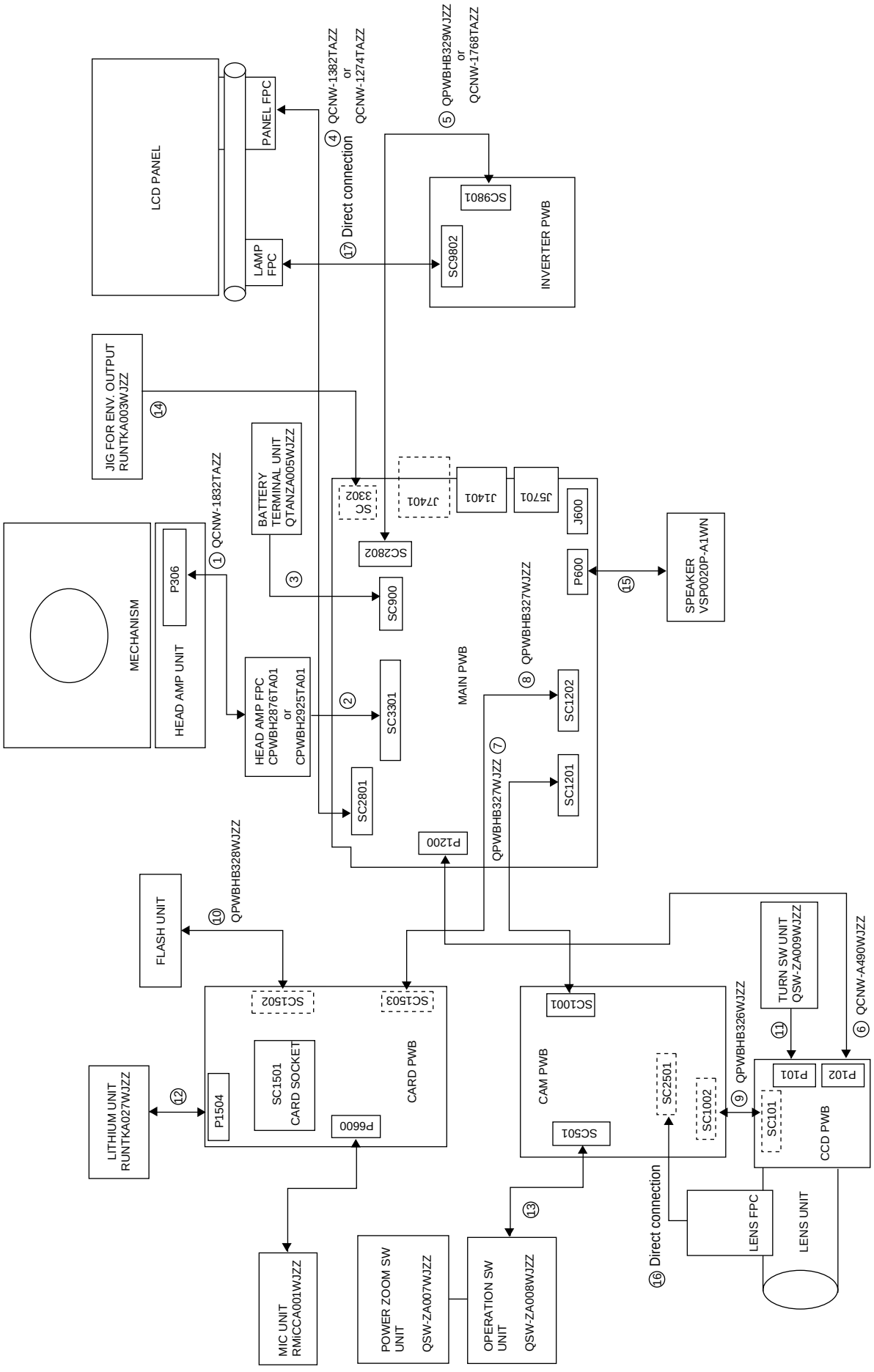
Before starting the electric circuit adjustment

- The adjustment methods described herein are used, in most cases, when the expendable mechanical parts, including the video head, have been replaced, at which time the electrical circuits need to be readjusted. Before adjusting the electrical circuits, make sure that the mechanism works properly (i.e., the mechanism is properly adjusted). Incase of the occurrence of any problem to the electrical circuits, be sure to use the specified measuring instruments to locate the area to which the problem is occurring, and then take the necessary action, including repair, replacement or adjustment, exactly as instructed in the electrical adjustment methods that will follow.
  Do not attempt to make adjustments without using the proper measuring instruments.
- This machine is configured so that the electrical circuits inside its PWB unit are composed, for the most part, of high-density, small surface-mounted component parts for downsized machine body.
  To perform repair service or parts replacement, do so using a soldering iron, but in as short a time as possible; this is because surface-mounted component parts are generally so small in size and susceptible to heat, as compared with the large discrete parts used in TV sets, desk-top video decks, etc., that attempting to heat their electrodes for a longer time than is necessary with a soldering iron may result in their becoming defective.
  This applies particularly when replacing the laminated chip capacitors.
  For this purpose, ceramic soldering irons with a temperature regulator are recommended (iron tip temperature 250°C and soldering time 5 seconds or shorter).

VL-MC500U/K Specifications of service jigs

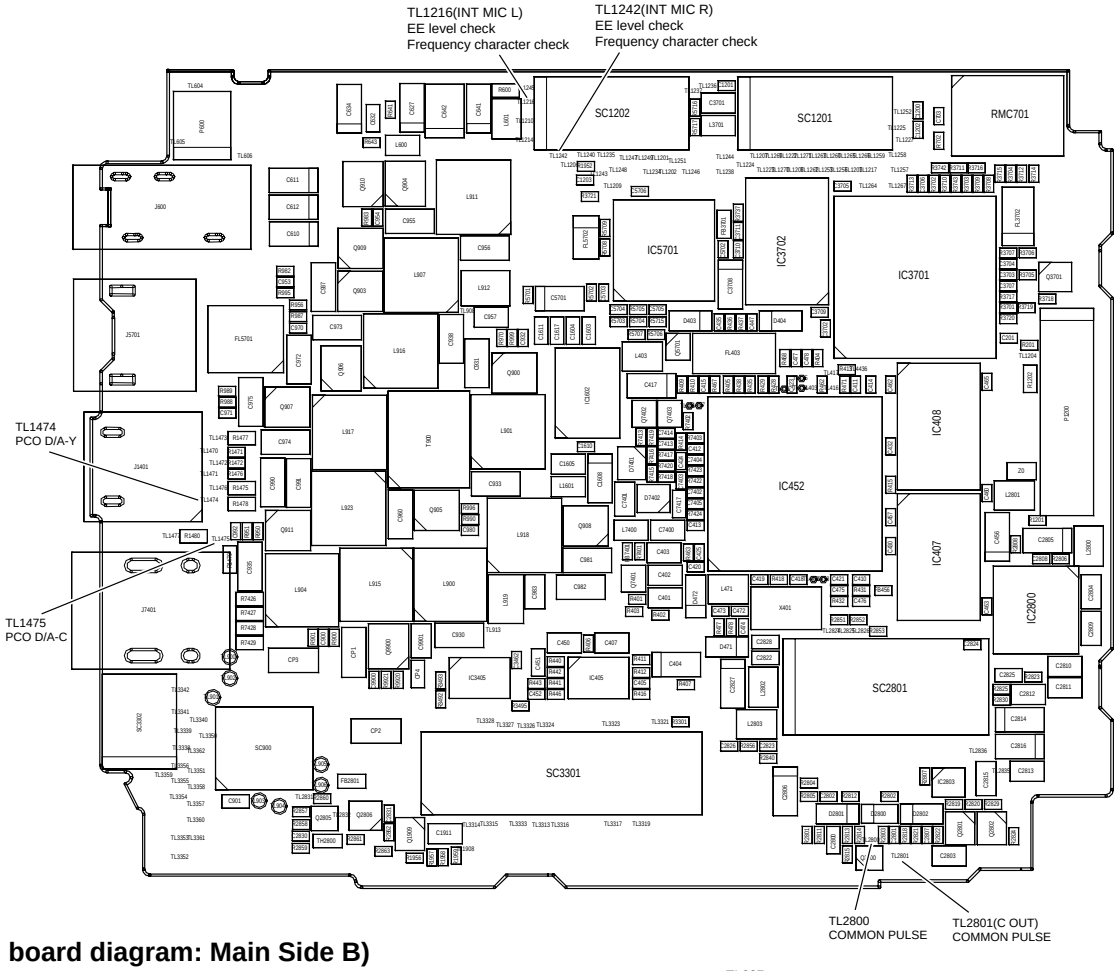
No.	Connection section	Connector REF. No.	No. of pins	New or Continuation	Part cord	Price code
1	H/A_PWB—H/A_FPC	P306—	80B-B	C	QCNW-1832TAZZ	BV
2	H/A_FPC—Main	—SC3301	80B-B		CPWBH2876TA01 Product unit use or CPWBH2925TA01 Product unit use	AS AR
3	Main—Battery Terminal	SC900←	20B-B		QTANZA005WJZZ Product unit use	AM
4	Main—LCD	SC2801—LCD	24	C	QCNW-1382TAZZ or QCNW-1274TAZZ	BD AZ
5	Main—Inverter PWB	SC2802—SC9801	8	C	QPWBHB329WJZZ Product unit use or QCNW-1768TAZZ Product unit use(With DC5, use)	AD BF
6	Main—CCD PWB	P1200—P102	14		QCNW-A490WJZZ Product unit use	AH
7	Main—Cam PWB	SC1201—SC1001	33		QPWBHB327WJZZ Product unit use	AS
8	Main—Card PWB	SC1202—SC1503	33		QPWBHB327WJZZ Product unit use	AS
9	CCD—Cam PWB	SC101—SC1002	27		QPWBHB326WJZZ Product unit use	AE
10	Card—Flash Unit	SC1502←	12		QPWBHB328WJZZ Product unit use	AF
11	CCD—Turn SW Unit	P101←	3		QSW-ZA009WJZZ Product unit use	AG
12	Card—Li Unit	P1504←	2		RUNTKA027WJZZ Product unit use	AG
13	CAM—Power/SW Unit	SC501←	17		QPWBHB332WJZZ Product unit use QSW-ZA008WJZZ Product unit use QSW-ZA012WJZZ Product unit use	AF AP AZ
14	TP Jig for Envelope confirmation	SC3302←	10PB-B	C	RUNTKA003WJZZ	BF
15	Main—Sperker	P600←	2		VSP0020P-A1WN Product unit use	AK
16	Cam—Lens	SC2501←	20		Direct connection	—
17	Inverter—Lamp	SC9802—Lamp	4		Direct connection : High tension caution	—

VL-MC500U/K Service jig configuration

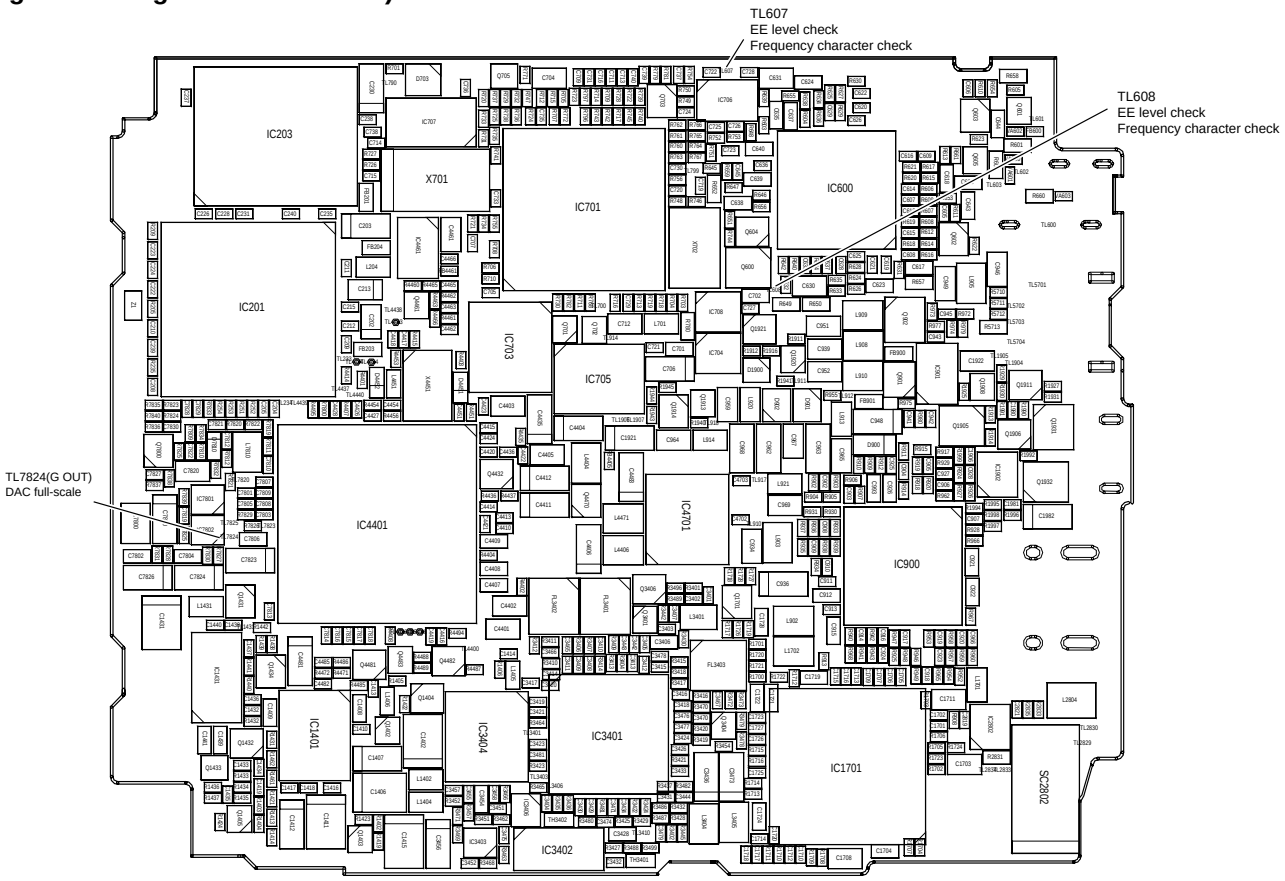


[TEST POINT]

(Wiring board diagram: Main Side A)



(Wiring board diagram: Main Side B)



[Making adjustments]
Adjusting the servo system controller and related parts
1. Setting the system codes

Replacement of IC705 E^2PROM requires the following data to be set in this order.

[Procedure]

Set the unit to the VCR mode and set the data for each address.

Code	1. Model code		2. Destination code		3. Specification code		4. Menu selection code		5. Software switching code		6. Calender switching	
Address	01	09	02	0A	03	0B	04	0C	05	0D	07	0F
Data	00	FF	01	FE	1C	E3	00	FF	00	FF	02	FD

When replacing the IC705 E^2PROM, first make the following settings and then start the adjustments.

(1) Electromagnetic conversion

Address	27	28	2B	*105	25	26
Data	40	90	90	80	40	90

* The address uses only when replacing the IC302.

• Adjustment with automatic machine

Mode	VCR ADJ mode
Procedure	1) Using the 12 command, set the VCR adjustment mode. 2) Using the 20 command, give the E^2PROM write permission. 3) Set the system code with the 22 command for each type. 4) Using the command, set write inhibition. 5) Using the command, cancel the adjustment mode.
Examples	• During E^2PROM (IC705) replacement.

• Manual adjustment

Mode	VCR ADJ mode
Procedure	1) Set the CAM/OFF/VCR selection switch to VCR. 2) Press “CONTINUE” → ”VCR adjustment” on the remote controller to set the VCR adjustment mode. (At this time an indication “VCR ADJ” appears at the left lower side.) Enter a setting corresponding to the address. <Setting method> 3) Adjust the address by moving up and down the blinking numeral with the FF and REW key, and fix the address by pressing the PB key. 4) Adjust to the setting by moving up and down the blinking numeral with the FF or REW key, and set data by pressing the PB key. 5) Press the STOP key to set the address set state. 6) Repeat the operations 3), 4) and 5) as much as input addresses. After completion of input of all items hold down the “CONTINUE” key to cancel the VCR adjustment mode. 7) Set the CAM/OFF/VCR selection switch to OFF.
Examples	• During E^2PROM (IC705) replacement.

2. HSWP adjustment

Mode	VCR ADJ mode
Procedure	1) Play back the alignment tape in the video mode. 2) Press the "CONTINUE" and "HSWP ADJ" keys on the adjustment remote control in this order. → This executes the HSWP adjustment. When the adjustment is successful, the LCD lights up [OK] and the cassette is automatically ejected. If not properly adjusted, the LCD lights up [NG].
Examples	• During mechanism replacement. • During E^2PROM replacement (IC302 inside the head amplifier circuit board).

3. SHUT OFF adjustment

Mode	VCR ADJ mode
Procedure	1) Load a recordable tape, and set the camera mode. 2) Press the "CONTINUE" and then the "TEST SEL" on the remote control for adjustment to enter the TEST mode (T-01 blinks). 3) Select T-03 with the FF or REW key and then press the PB key. 4) Observing the power voltage from TL900(-), set it so that TL904(+) obtains 6.00V ± 50mV. 5) Press the "DISPLAY" button on the main unit. Turn off the power and the adjustment is completed.
Examples	• During microcomputer (IC701) , REGULATOR (IC704) or E²PROM (IC705) replacement.

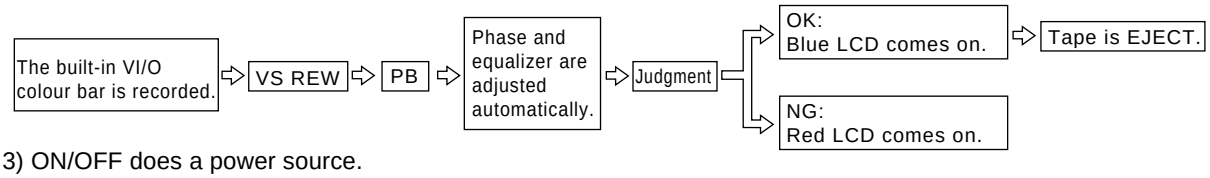
ADJUSTING THE ELECTROMAGNETIC CONVERSION CIRCUIT SYSTEM

1. PLL VCO adjustment

Mode	VCR ADJ mode
Procedure	1) Playback the alignment tape (or a self-recorded tape). 2) Call the adjustment mode (V-ADJ). 3) Set the address "2A" and call the data. 4) Set the called data with the FF/REW key to the point where the playback screen appears. (At this time, the screen full of block noise is OK.)
Examples	• During E²PROM replacement. • During circuit board (Main) replacement.

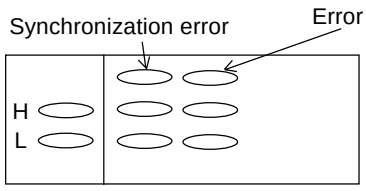
2. Phase and equalizer adjustment → (Performed in the VCR mode)

Mode	VCR ADJ mode
Procedure	1) Load a self-recorded tape into the deck. 2) After playback for 3 minutes, select the test mode 0F using the remote control for adjustment to start the automatic adjustment. (The following sequence is automatically performed.)



3) ON/OFF does a power source.
4) Error rate check
Select and fix the TEST MODE 0B on the adjustment remote control.
5) Manual adjustment method (video adjustment mode)
* Perform this adjustment with the self-recording/playback in the LP mode.
For phase, vary the data for the address 26 and 2B, and for equalizer, vary the data for the address 25 and 27, to set the error rate is made as small as possible.

	Phase	Equalizer
H ch side	2B	27
L ch side	26	25

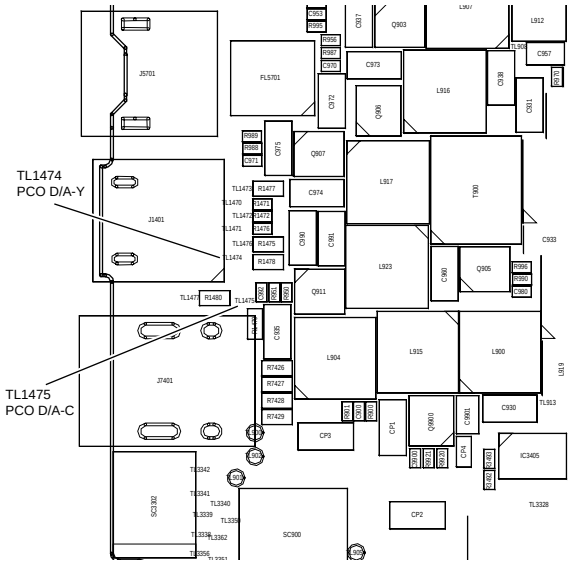


Synchronization error 20 or less
Error rate 200 or less (SP Mode)
330 or less (LP Mode)

Examples	• During mechanism replacement. • During circuit board (Main) replacement. • During E²PROM replacement.

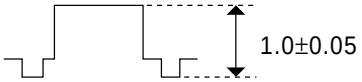
ADJUSTING THE VIDEO I/O CIRCUIT SYSTEM

(Wiring board diagram: Main Side A)



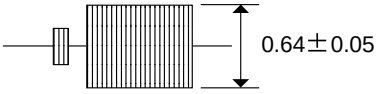
1. PCO D/A-Y adjustment

Test point	TL1474 (connected to oscilloscope)	Address	VCR ADJ 566
Mode	EE mode		
Procedure	1) Connect the AVS cable and then connect it to the monitor (TO). 2) Call the adjustment mode (V-ADJ). 3) Set the address to "566", and call the date. (100% white signal is output.) 4) Vary the date with the FF and REW keys to set the signal appearing at TL1474 to 1.0Vp-p ± 0.05Vp-p.		
Examples	• During IC705 replacement. • During IC4401 replacement. • During IC1401 replacement.		



2. PCO D/A-C adjustment

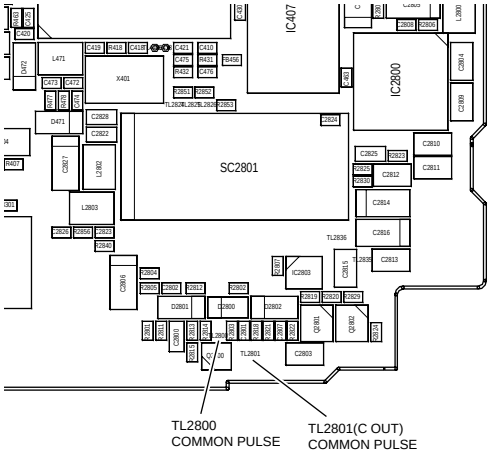
Test point	TL1475	Address	VCR ADJ 567
Mode	EE mode		
Procedure	1) Connect the AVS cable and then connect it to the monitor (TO). 2) Call the adjustment mode (V-ADJ). 3) Set the address to "567", and call the data. 4) Vary the data with the FF and REW keys to set the signal appearing at TL1475 to 0.64Vp-p ± 0.05Vp-p.		
Examples	• During IC705 replacement. • During IC4401 replacement. • During IC1401 replacement.		



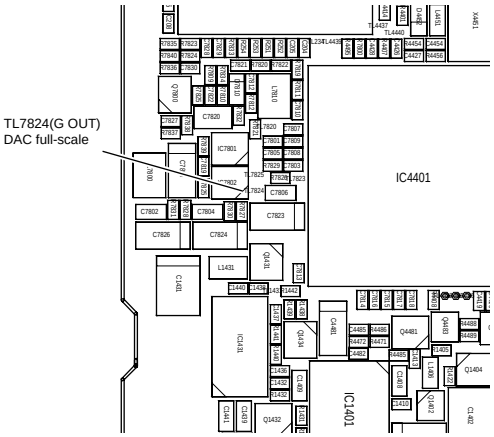
ADJUSTING THE LCD CIRCUIT

* To make this adjustment, set the backlight switch to the "NORMAL" position.

(Wiring board diagram: Main Side A)



(Wiring board diagram: Main Side B)



Adjustment procedure and connecting same as the VCR section.

1. DAC full-scale adjustment

Test point	TL7824(G OUT)
Address	VCR ADJ 5DF(G)
Mode	VCR AV input
Procedure	1) Set the data of the addresses 582/585/59A/5E1 to FF/80/77/00, respectively. (At this time, the LCD is not displayed.) 2) Set the data of the addresses 595/5D0/5D3 to 00/80/48, respectively. 3) Connect a digital voltmeter to TL7824(G_OUT) to measure the DC voltage. * The voltage value at this time is regarded as (DA_VG). 4) Set the data of the addresses 595/5D0 to 80/00, respectively. 5) Adjust the DC voltage to the adjustment standard value at the address 5DF. 6) Preset the same data as the address 5DF to 5DE/5E0. 7) Restore the data of the addresses 582/585/595/59A/5D0/5D3/5E1. (Initial values: 40/C5/28/7F/28/40/71)
Adjustment rating	DA_VG+0.55V ± 10mV
Examples	• During IC705 replacement. • During VIO ENG (IC4401) replacement.

2. COMMON PULSE adjustment

Test point	TL2801(C OUT)	Address	VCR ADJ 32(C)
Mode	VCR AV input		
Procedure	1) Connect TL2800 to GND. 2) With VCR ADJ 32, adjust the output voltage of TL2801 and the DC voltage value of the digital voltmeter to the specified adjustment values.		
Adjustment rating	7.05V ± 50mV		
Examples	• During IC705 replacement.		

3. COM-BIAS adjustment

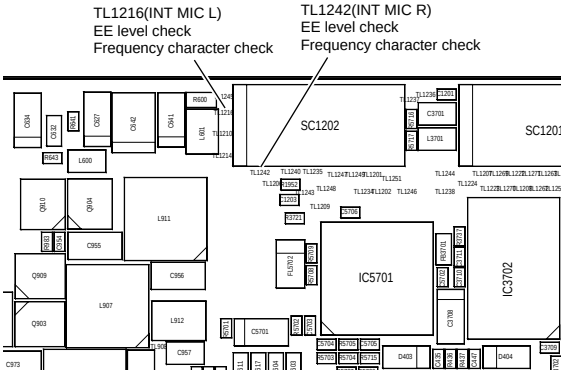
Test point	LCD panel display surface	Address	VCR ADJ 33
Mode	VCR AV input		
Procedure	1) Input the white 100% signal to AV input. 2) Set up the illuminance meter (TOPCON IM-3) on the LCD panel surface. (The outside light must not enter.) 3) Minimize the ripple of the output waveform of the illuminance meter.		
Adjustment rating	Minimum Response time : 0.6sec		
Remark	Make this adjustment after 5-minute or longer aging.		
Examples	• During LCD Panel replacement. • During IC705 replacement.		

4. White Balance adjustment

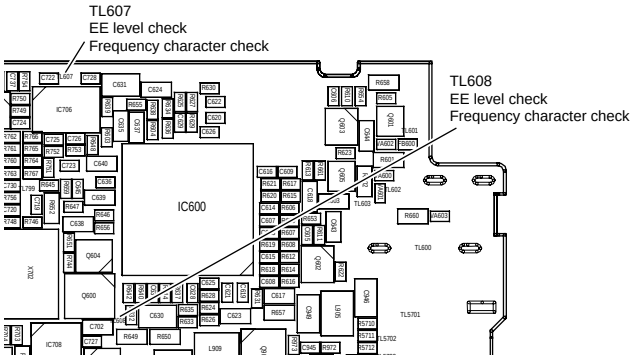
Test point	LCD panel display surface	Address	VCR ADJ 584, VCR ADJ 586
Mode	VCR AV input		
Procedure	1) Input the white 40% signal to AV input. 2) Input the white 40% signal to the standard monitor, and adjust it to become equal to that of the screen.		
Adjustment rating	Standard monitor		
Remark	Make this adjustment after 5-minute or longer aging.		
Examples	• During LCD monitor replacement. LCD Panel • During IC4401, IC705 replacement.		

ADJUSTING THE MIC AMP CIRCUIT

(Wiring board diagram: Main Side A)



(Wiring board diagram: Main Side B)



1. EE level check

Measuring instrument	Valve voltmeter	Test point	TL607, TL608
Mode	P-ON (CAM)	Adjustment rating	-8dBs ± 3dB
Test signal	1kHz -21dBs sine wave		
Procedure	1) Input 1kHz, -21dBs sine wave into TL1216(INT MIC L) and TL1242(INT MIC R). 2) Make sure that the signal level of TL607 Audio-L out and TL608 Audio-R out is within the standard limits.		
Remark	————		

2. Frequency character check

Measuring instrument	Valve voltmeter	Test point	TL607, TL608
Mode	P-ON (CAM)	Adjustment rating	(1kHz standard) 100Hz: -12dBs ± 3dB 10kHz: -1dBs ± 3dB
Test signal	100Hz, 10kHz -21dBs sine wave		
Procedure	1) Input 100Hz, -21dBs sine wave and then 10kHz, -21dBs sine wave into TL1216(INT MIC L) and TL1242(INT MIC R). 2) At this time make sure that the signal level of TL607 Audio-L out and TL608 Audio-R out is within the standard limits (1kHz standard).		
Remark	————		

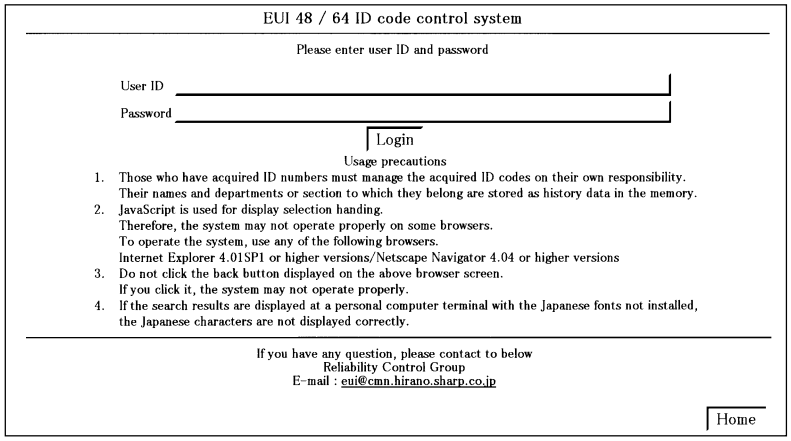
DV INTERFACE (IEEE1394) ID SETTING

This unit has a DV interface function conforming to IEEE1394. Therefore, each individual ID number must be used for each unit. Since this ID is written on the E^{2}PROM (IC302) on the head amp PWB, the ID must be newly written when replacing this IC or the head amp PWB.

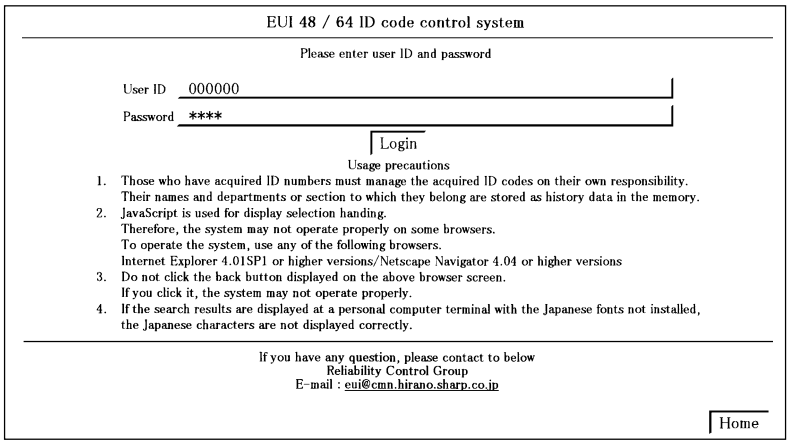
Address	180, 17F, 17E	Mode	VCR
Adjustment rating	ID number obtained from the URL below		
Procedure	1) Refer to the ID code application below. 2) Set the data acquired in step 1) to the corresponding address in the VCR adjustment mode. * Download an ID number or write it on the main unit according to the notice from the AV Systems Group "Issue No. S8-001".		
Examples	• During E^{2}PROM (IC302: on the H/A unit) replacement. • During the H/A unit (RAMP-0035TAN0) replacement.		

■ ID code is acquired

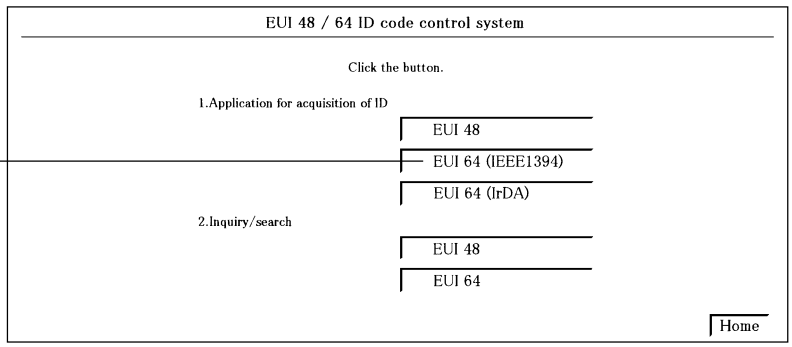
1. Connect with the EUI48/64 ID code control system.
   (1) Start the Internet Explorer or Netscape Navigator.
   (2) Access the following address.
   (URL:http://www.rcg.kami.sharp.co.jp/quics/e_index.html)
   Select the "EUI48/64 ID code control system" from the "Service" item.
   Note: If you want to establish a connection by directly inputting the URL, please input the following.
   URL:http://www1.rcg.kami.sharp.co.jp:7000/adrs_agt/adrs_dba/ide00010.main
   The login screen will appear.


EUI 48 / 64 ID code control system
Please enter user ID and password
User ID
Password
Login
Usage precautions
1. Those who have acquired ID numbers must manage the acquired ID codes on their own responsibility.
Their names and departments or section to which they belong are stored as history data in the memory.
2. JavaScript is used for display selection handing.
Therefore, the system may not operate properly on some browsers.
To operate the system, use any of the following browsers.
Internet Explorer 4.01SP1 or higher versions/Netscape Navigator 4.04 or higher versions
3. Do not click the back button displayed on the above browser screen.
If you click it, the system may not operate properly.
4. If the search results are displayed at a personal computer terminal with the Japanese fonts not installed,
the Japanese characters are not displayed correctly.
If you have any question, please contact to below
Reliability Control Group
E-mail : eui@cmn.hirano.sharp.co.jp
Home

   (3) For the [User ID], input the [Password].
   Click on [Login].

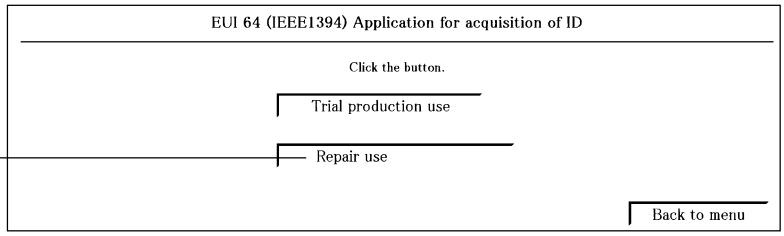

EUI 48 / 64 ID code control system
Please enter user ID and password
User ID 000000
Password ****
Login
Usage precautions
1. Those who have acquired ID numbers must manage the acquired ID codes on their own responsibility.
Their names and departments or section to which they belong are stored as history data in the memory.
2. JavaScript is used for display selection handing.
Therefore, the system may not operate properly on some browsers.
To operate the system, use any of the following browsers.
Internet Explorer 4.01SP1 or higher versions/Netscape Navigator 4.04 or higher versions
3. Do not click the back button displayed on the above browser screen.
If you click it, the system may not operate properly.
4. If the search results are displayed at a personal computer terminal with the Japanese fonts not installed,
the Japanese characters are not displayed correctly.
If you have any question, please contact to below
Reliability Control Group
E-mail : eui@cmn.hirano.sharp.co.jp
Home

   (4) Click on [EUI 64 (IEEE 1394)] from the
   [1. Application for acquisition of ID].

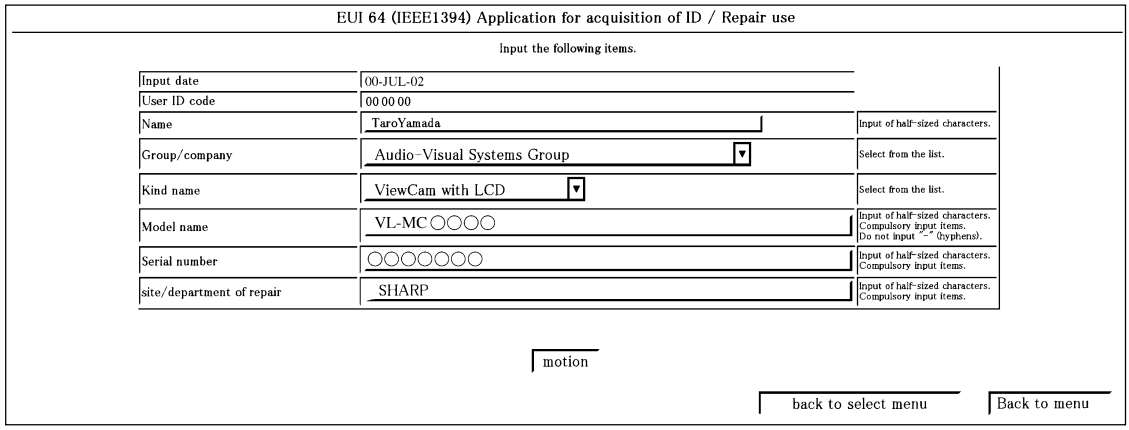


Click

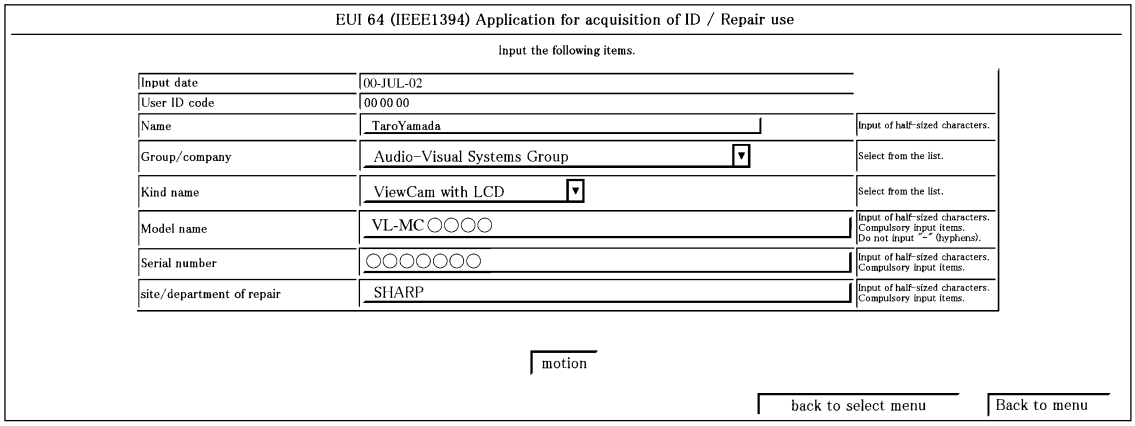
(5) Click on [Repair use].



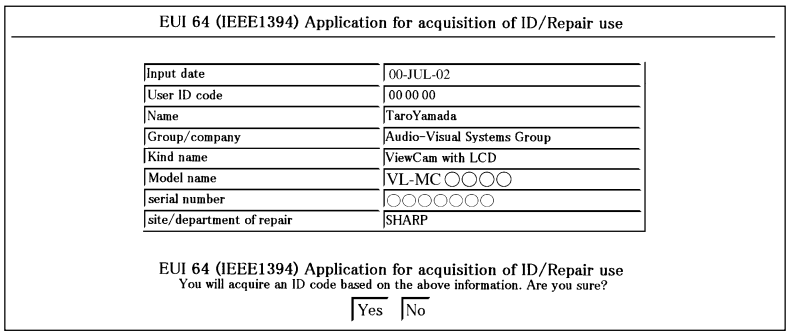
(6) Input the necessary information for the application.
For the indispensable input items, be sure to input them.
Select the [Group/company] and [Kind name] from the list.
Input the [Model name].
Input the [Serial number].
Input the [Site/department of repair].


EUI 64 (IEEE1394) Application for acquisition of ID / Repair use
Input the following items.
Input date 00-JUL-02
User ID code 00 00 00
Name TaroYamada Input of half-sized characters.
Group/company Audio-Visual Systems Group Select from the list.
Kind name ViewCam with LCD Select from the list.
Model name VL-MC○○○○ Input of half-sized characters. Compulsory input items. Do not input "-" (hyphens).
Serial number ○○○○○○○ Input of half-sized characters. Compulsory input items.
site/department of repair SHARP Input of half-sized characters. Compulsory input items.
motion
back to select menu
Back to menu

(7) Click on [motion].
The confirmation screen will appear.


EUI 64 (IEEE1394) Application for acquisition of ID / Repair use
Input the following items.
Input date 00-JUL-02
User ID code 00 00 00
Name TaroYamada Input of half-sized characters.
Group/company Audio-Visual Systems Group Select from the list.
Kind name ViewCam with LCD Select from the list.
Model name VL-MC○○○○ Input of half-sized characters. Compulsory input items. Do not input "-" (hyphens).
Serial number ○○○○○○○ Input of half-sized characters. Compulsory input items.
site/department of repair SHARP Input of half-sized characters. Compulsory input items.
motion
back to select menu
Back to menu

(8) Click on [Yes].


EUI 64 (IEEE1394) Application for acquisition of ID/Repair use
Input date 00-JUL-02
User ID code 00 00 00
Name TaroYamada
Group/company Audio-Visual Systems Group
Kind name ViewCam with LCD
Model name VL-MC○○○○
serial number ○○○○○○○
site/department of repair SHARP
EUI 64 (IEEE1394) Application for acquisition of ID/Repair use
You will acquire an ID code based on the above information. Are you sure?
Yes
No

2. Print the application result.
   (1) Print out the application result screen.
   Control the application result as evidence.
   To print it, select "Print (P)" from the "File (F)" in the menu bar or click on the print button in the tool bar.
   (2) Click on [Menu] to complete the application.
   If you create applications in succession, repeat steps (1)~(8).
   To complete it, click on [End] in the menu screen.

10-2. Camera Section Adjustments

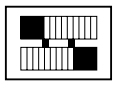
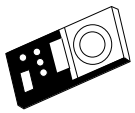
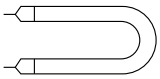
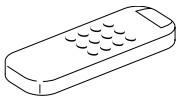
10-2-1. Camera section service

(1) Camera adjustment is performed after the set has been completed.
(2) Subjects, measuring instruments and jigs needed for camera section service and adjustments

• Gray scale chart • Color bar chart • Oscilloscope • Digital voltmeter • Halogen lamp: 2 pcs. • Vector scope	• Frequency counter • Illumination meter • Color temperature meter • Color temperature conversion filter HOYA "LB-165" • Color video monitor	• Video output cable • AC adapter • Extension cables • Remote control unit for servicing

10-2-2. List of camera jigs and tools

Configuration
<Note: The entries of list> 1. Name 2. Part No. 3. Code

 1. Gray scale chart (390 x 520 mm) 2. JiGCHART-1 3. CP	 1. Color bar chart (240 x 320 mm) 2. JiGCHART-4 3. DA	 1. Illumination meter (0 to 3000 lux) 2. JiGMETER-1 3. CT	 1. Color temperature meter (1600 to 40000 degrees K) 2. JiGMETER-2 3. EL
1. Color temperature conversion filter (3200 degrees K ⇒ 6800 degrees K) 2. JiGHOYA-LB165 3. BN	 1. PC plate connector drawer 2. JiGTH-SS10 3. AW	 1. Remote control until for servicing 2. RRMCG0033TASA 3. BT	

10-2-3. Adjusting the camera unit

(1) Preparations for adjustments and items to be checked
1) Set up the light box so that the entire pattern is evenly lit. Set the color temperature to 3200°K.
2) Use test patterns that are not dirty nor discoloured.
3) If the electrical circuitry gets in trouble, be sure to pinpoint the trouble spot with a measuring instrument and repair or replace the defective part.

(2) Remote control for servicing RRMCG0033TASA
To adjust the camera section of this machine, the remote control for servicing (RRMCG0033TASA) is used. The adjustment is made in such a manner that the remote control writes necessary data by way of the microprocessor to the specific addresses on the E^2PROM (IC705).
1) To adjust the camera:
Press the "CONTINUE" key first and then the "CAM ADJ" key.
This will show

CAM ADJ
□□□□

on the LCD screen, thereby having the camera unit ready for the adjustments.
2) Descriptions of the displays

CAM □□□□ (Address value) ADJ □□□□ (Data value)

(Indicates the camera adjustment mode.)

* The address values for this machine range from 0000 to 07FF.
* The data include byte data (the last two digits are effective) and 2-byte data (the last three digits are effective).
3) Descriptions of the remote control keys
"FF" key: Increases the address and data values.
"REW" key: Decreases the address and data values.
"PLAY" key: Specifies addresses and calls the data.
This key also fixes the data values.
"STOP" key: Clears the data to enable the selection of address.

4) Operation flow

→ FF or REW → PLAY → FF or REW → PLAY → STOP →

Address is selected and specified, with the data called. Then the called data are selected and fixed. The operation flows in this sequence.

5) When the adjustment is complete:
Press the "CONTINUE" key to let the "CAM ADJ" display disappear from the screen.
Note: Before terminating the adjustments, make sure that the adjustment mode is neither the auto-focus function adjustment mode nor the camera signal system adjustment mode (these modes are mentioned later).

- Camera unit adjustment modes
The camera unit is adjusted in two types of modes: the auto-focus function adjustment mode and the camera signal system adjustment mode.

Note: E^2PROM contains the adjustment item data as shown below. If it is changed, data rewriting and confirmation of latest data must be performed.
1) E^2PROM(IC705) on the Main unit
Lens data and Signal system adjustment data

(3) Auto-focus function adjustment mode

- The camera unit uses a microprocessor-controlled auto-focus zoom lens.
The auto-focus circuit incorporated in this unit is designed to execute the image processing where the focusing action is done by taking advantage of the fact that the high-frequency components in the image signals increase as the focus intensifies. Moreover, to achieve high magnifying power with a small lens, the camera unit incorporates the inner focus system in which the focus is shifted by moving the master lens (rear lens) back and forth. This inner focus system is a full-range focus type by which the focus can be shifted from approximately 10 mm to the infinity. It should be noted, however, that since the closest subject distance at the telephoto end is fixed at 1.5 m, subjects in a closer range than 1.5 m at the telephoto end will be out of focus. For this reason, the unit is designed so the zoom control is automatically shifted to the wide angle side until the position is found where the subject can be focused on.

In the auto-focusing system of this until, the following constitute the important factors:
- Master lens position detection data
- Iris position detection data
- Zoom lens position detection data

These detection data are handled and stored by the microprocessor, lens by lens, into the E^2PROM.
Therefore, in the following cases, (3) auto-focus function adjustment is required:
- When the lens has been replaced
- When the CCD has been replaced
- When the E^2PROM has been replaced
- When the CCD PWB and Camera PWB has been replaced

1) Shifting to the auto-focus function adjustment mode
Set the data for the address "13FE" to "□□ 01".
⇩
This makes the screen fade temporarily in white and shifts to the auto-focus function adjustment mode.

* When this adjustment mode has been shifted to, make the adjustment according to (5) Camera unit adjustment procedure.
* In this adjustment mode, the lens can not be operated.

2) Shifting to the normal operation mode
Set the data for the address "13FE" to "□□ FF".
⇩
This makes the screen fade temporarily in white and shifts to the normal operation mode.
⇩
Press the "CONTINUE" key, and the "CAM ADJ" display goes out of the screen, enabling the normal operation.

(4) Camera signal system adjustment mode

In the camera signal system adjustment mode, the automatic white balance is disabled to allow for the adjustment of the camera unit. At this time, the white balance mode is fixed at the INDOORS mode and the focus mode is switched to the manual focus mode.

1) Shifting to the camera signal system adjustment mode

Set the data for the address "0000" to "□□00".

⇩

This shifts the camera signal system adjustment mode.

* When this adjustment mode has been shifted to, make the adjustment according to (5) Camera unit adjustment procedure.

2) Shifting to the normal operation mode

Set the data for the address "0000" to "□□FF".

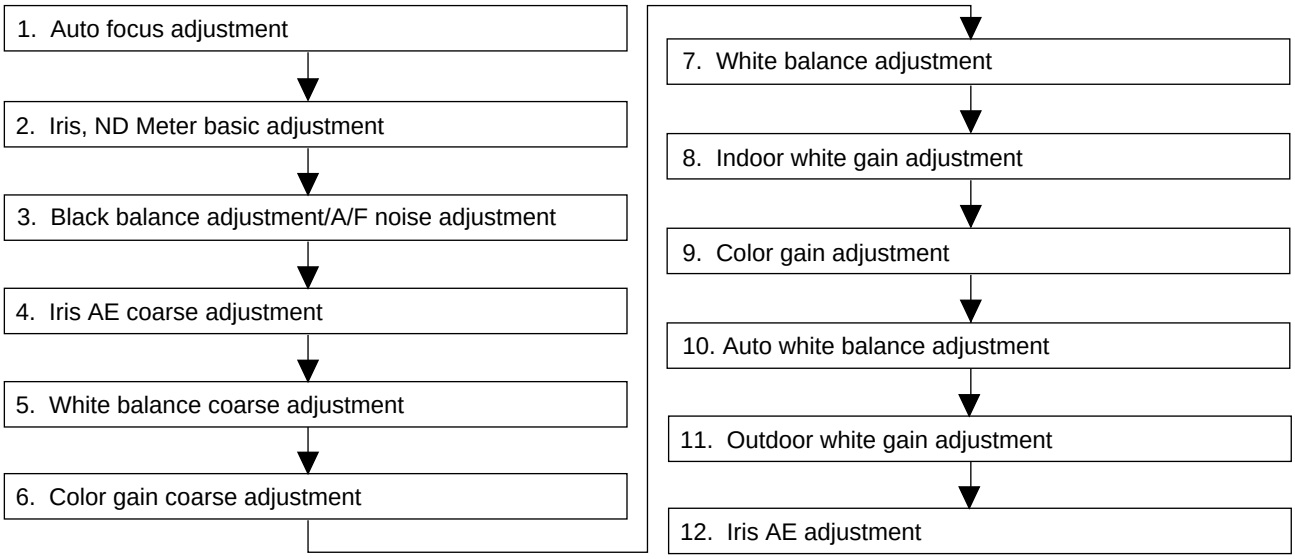
⇩

This shifts the mode to the normal operation mode.

⇩

Press the "CONTINUE" key, and the "CAM ADJ" display goes out of the screen, enabling the normal operation.

(5) Camera unit adjustment procedure


1. Auto focus adjustment
2. Iris, ND Meter basic adjustment
3. Black balance adjustment/A/F noise adjustment
4. Iris AE coarse adjustment
5. White balance coarse adjustment
6. Color gain coarse adjustment
7. White balance adjustment
8. Indoor white gain adjustment
9. Color gain adjustment
10. Auto white balance adjustment
11. Outdoor white gain adjustment
12. Iris AE adjustment

* The above 1. Auto-focus function adjustment in the auto-focus function adjustment mode, whereas the other adjustments are made in the camera signal system adjustment mode.

(6) Replacement procedure of gyro unit

1) When replacing E^2PROM on lens unit of main unit with the gyro unit not replaced

Since the adjustment data of gyro is written in E^2PROM, copy the data of addresses "1064" and rewrite them after replacement.

2) When replacing the gyro sensor: RMC91

After replacing with the specified gyro sensor, write the following data in the addresses "1064".

Ref No.	Part code	Address	Data
RMC91	Replacement with RSNSG0012CEZZ	1064	01D0

10-2-4. Adjustment procedures

Item	Adjustment method

(1) Auto-focus adjustment

Set the unit to the auto-focus function adjustment mode and write data to the address "13FD" one after another. This executed the adjustments automatically. The items to be adjusted are as listed below. Every time an adjustment is made properly, the data "FF" is written to the address. After each adjustment, make sure that the adjustment has been made properly, and then go on to the next adjustment item.

Address	Data	Adjustment item
0000	000C	Sonia adjustment
	0012	WIDE end adjustment
	0006	WIDE end focus ∞ position adjustment
	0008	TELE end focus ∞ position adjustment
	000D	Zoom tracking adjustment

Note 1: To adjustment of ∞ position is executed by actually picking up the image of subject. For this adjustment use the subject with clear profile.
Especially, if the adjustment of TELE end focus ∞ position is made without picking up the image of remote subject, adjustment failure may occur.
Adjustment of WIDE end focus ∞ position: 3 m or more
Adjustment of TELE end focus ∞ position: 50 m or more

Note 2: In case of ∞ position adjustment the field depth is important to ensure the adjustment accuracy. If the field depth is high, the focus becomes too stable , which may cause incorrect adjustment of ∞ position. Therefore the adjustment must be made with low field depth (with iris opened).

The iris can be opened with the high-speed shutter.
1. It returns to the normal operation mode.
2. In the normal operation mode, set the high-speed shutter mode until the iris is opened. (Refer to the operation manual.)
3. Display “CAM ADJ” with the remote control for service.
4. It shifts to the auto-focus adjustment mode.
5. Perform the ∞ position adjustment.
6. After completing the ∞ position adjustment, return the high-speed shutter mode to the normal mode.

(2) Iris basic adjustment

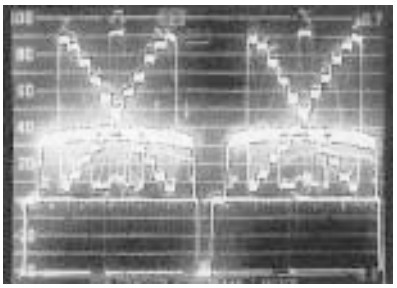
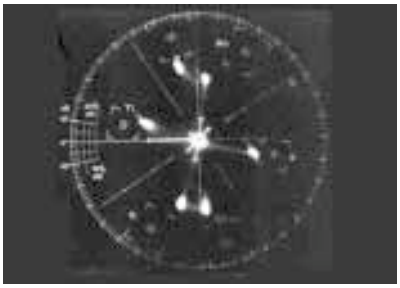
This is for adjusting the operating point of the hole element installed in the iris meter of the lens.
The adjustment is automatically done by sequentially writing the data at the address "13FD" in the camera signal system adjustment mode.The items to be adjusted are as listed below. Every time an adjustment is made properly, the data "00FF" is written to the address.

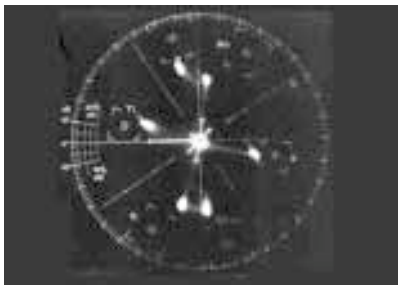
Address	Data	Adjustment item
0001	0009	Hall offset adjustment
	000A	Iris offset adjustment
	000B	Iris close adjustment

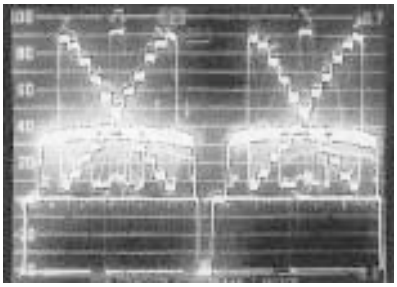
In camera signal system adjustment mode (write the data "□□00" to the address "0000"), it is set as adjustment mode after canceling auto focus adjustment mode (write the data "□□00" to the address "13FD").

(3) Black balance adjustment/ A/F noise adjustment

Write the data "□□01" to the address "0001" This starts the adjustment automatically.
When the adjustment is completed properly, the data "00FF" is written automatically.

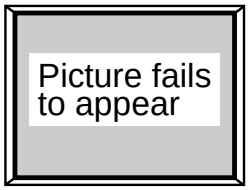
Item	Adjustment method
(4) Iris AE coarse adjustment • Measurement terminal: S terminal luminance signal output (75 Ω termination) • Address: "0002" AE_CVT • Measuring instrument: Oscilloscope (horizontal sync) • Object: Grey scale • Data variation width: "0000" to "00FE"	(1) Video output is observed with the oscilloscope in the grey scale standard record state, the data of address "0002" is rewritten, and the luminance signal level is adjusted white to 680 ± 10mVp-p, gray of the background 330 ± 10mVp-p.  100mV/div
(5) White balance coarse adjustment • Measurement terminal: EE output • Address: "0128" CGAIN_KR_W "012A" CGAIN_KB_W • Measuring instrument: Vector scope • Object: Grey scale • Data variation width: "0000" to "03FF"	(1) Indication on the vector scope is observed in the grey scale standard record state, data of address "0128" and "012A" are rewritten, and an adjustment is made so that the luminous dot is located in the position of burst ratio: R-Y 0 ± 5% B-Y 0 ± 5%
(6) Color gain coarse adjustment • Measurement terminal: EE output • Address: "013A" CGIN RYG "013C" CGIN BYG "0138" CMAT RYG "0136" CMAT BYG "07DE" Yellow amplitude "07DD" Yellow phase • Measuring instrument: Vector scope • Object: Color bar chart • Data variation width: "0000" to "00FF"	(1) The color bar chart is imaged, and the picture angle is adjusted so as to get white level 600 mV. Indication on the vector scope is observed, the data of address "013A", "013C", "0138", "0136", "07DE"and "07DD" are rewritten, and setting is made so that the red, blue and yellow luminous dots are located in the following positions. (The gain of vector scope must be set on 75% amplitude point on the B-Y axis.)  Adjustment address Red amplitude 1.75 ± 0.1 time (burst ratio) : "013A" Blue amplitude 1.35 ± 0.1 time (burst ratio) : "013C" Yellow amplitude 1.25 ± 0.1 time (burst ratio) : "07DE" Red phase 106° ± 2° : "0138" Blue phase 358° ± 2° : "0136" Yellow phase 168° ± 2° : "07DD"

<table>
<tr><th>Item</th><th>Adjustment method</th></tr>
<tr><td>(7) White balance adjustment
• Measurement terminal:
EE output
• Address:
"0128" INDOOR_W/B R
"012A" INDOOR_W/B R
• Measuring instrument:
Vector scope
• Object:
Grey scale
• Data variation width:
"0000" to "03FF"</td><td>(1) White balance adjustment is performed repeatedly.
 </td></tr>
<tr><td>(8) Indoor white gain adjustment
• Measurement terminal:–
• Address: 0001
• Measuring instrument:–
• Object: White pattern
• Data variation width:–</td><td>(1)The adjustment is automatically done by writing the data "05" at the address "001" in the signal system adjustment mode.
When the adjustment is normally completed, the data "FF" will be return to the address "001". If another data except "FF" is returned, it will be judged as the poor adjustment.</td></tr>
<tr><td>(9) Color gain adjustment
• Measurement terminal:
EE output
• Address:
"013A" CGIN RYG
"013C" CGIN BYG
"0138" CMAT RYG
"0136" CMAT BYG
"07DE" Yellow amplitude
"07DD" Yellow phase
• Measuring instrument:
Vector scope
• Object:
Waveform monitor color bar chart
• Data variation width:
"0000" to "00FF"</td><td>(1) Color gain adjustment is performed repeatedly.
 
<table><tr><th></th><th></th><th>Adjustment address</th></tr><tr><td>Red amplitude</td><td>1.75 ± 0.05 time (burst ratio)</td><td>: "013A"</td></tr><tr><td>Blue amplitude</td><td>1.35 ± 0.05 time (burst ratio)</td><td>: "013C"</td></tr><tr><td>Yellow amplitude</td><td>1.25 ± 0.05 time (burst ratio)</td><td>: "07DE"</td></tr><tr><td>Red phase</td><td>106° ± 1°</td><td>: "0138"</td></tr><tr><td>Blue phase</td><td>358° ± 2°</td><td>: "0136"</td></tr><tr><td>Yellow phase</td><td>168° ± 2°</td><td>: "07DD"</td></tr></table></td></tr>
<tr><td>(10) Auto white balance adjustment
• Measurement terminal:
EE output
• Address:
"000C" OUTDOOR R
"000E" OURDOOR B
• Measuring instrument:
Vector scope
• Object:
Grey scale
• Data variation width:
"0000" to "03FF"</td><td>(1) The color temperature conversion filter (LB165) is mounted in front of lens.
(2) Indication of vector scope is observed in the grey scale standard record state, and an adjustment is made so that the luminous dots are located in the following positions:
R-Y 0 ± 5% (burst ratio)
B-Y 0 ± 5% (burst ratio)
 </td></tr>
<tr><td>(11) Outdoor white gain adjustment
• Measurement terminal:–
• Address: 0001
• Measuring instrument:–
• Object: White pattern
• Data variation width:–</td><td>(1) Attach the color temperature conversion filter (LB165) in front of the lens.
(2) The adjustment is automatically done by writing the data "06" at the address "001" in the signal system adjustment mode.
When the adjustment is normally completed, the data "FF" will be return to the address "001". If another data except "FF" is returned, it will be judged as the poor adjustment.</td></tr>
</table>

Item	Adjustment method
(12) Iris AE adjustment • Measurement terminal: S terminal luminance signal output (75 Ω termination) • Address: "0002" AE_CVT • Measuring instrument: Oscilloscope (horizontal sync) • Object: Grey scale • Data variation width: "0000" to "00FE"	(1) Set the unit to the normal operation mode (write the data "□□FF" to the address "0000"). (2) Observe the video output with an oscilloscope in the gray scale standard recording state, and make sure that the luminance signal level of white is 640 ± 10 mVp-p and the luminance signal level of gray in the gray scale background is 290 ± 10 mVp-p.  100mV/div

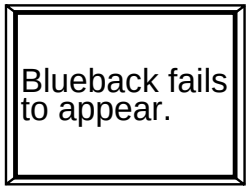
11. USEFUL TIPS (PROBLEMS DIFFER FROM THOSE FOUND ON VHS OR 8MM DECKS BECAUSE THE SIGNALS ARE DIGITALLY PROCESSED.)

Camera (EE mode)



Major circuits to be checked
- CCD
- Camera circuits (CDS, ADC, CAM ENGINE)
- MECHA/SYSTEM MiCON (IC701)
- VIDEO I/O (IC1401)
- VIO ENGINE (IC4401)

VCR (EE mode)

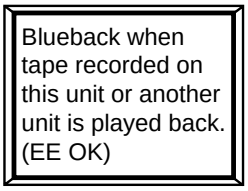


Major circuits to be checked
- MECHA/SYSTEM MiCON (IC701)
- CAM ENGINE (IC201)
- REC/PB ENGINE (IC452)

Camera (REC mode)
VCR (PB mode)

Major circuits to be checked
- CAM ENGINE (IC201)
- REC/PB ENGINE (IC452)

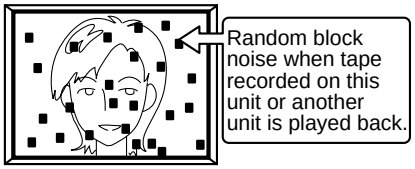
Camera (REC mode)
VCR (PB mode)



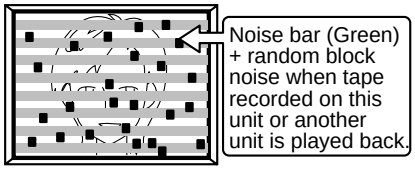
Major circuits to be checked
- EQ/PLL (IC3401)
- Head amplifier (IC301)

* Dirty or defective video head

Camera (REC mode)
VCR (PB mode)



or



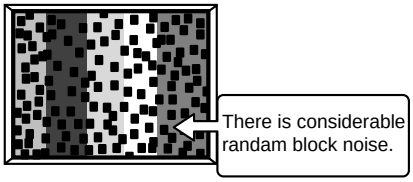
Major circuits to be checked
- EQ/PLL (IC3401)
- Head amplifier (IC301)

* Dirty or defective video head

VCR (PB mode) + color bar

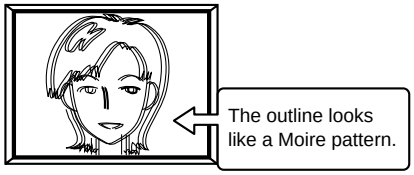
Major circuits to be checked
- CAM ENGINE (IC201)

VCR (PB mode) + color bar



Major circuits to be checked
- Adjustment of the electromagnetic conversion circuit system.

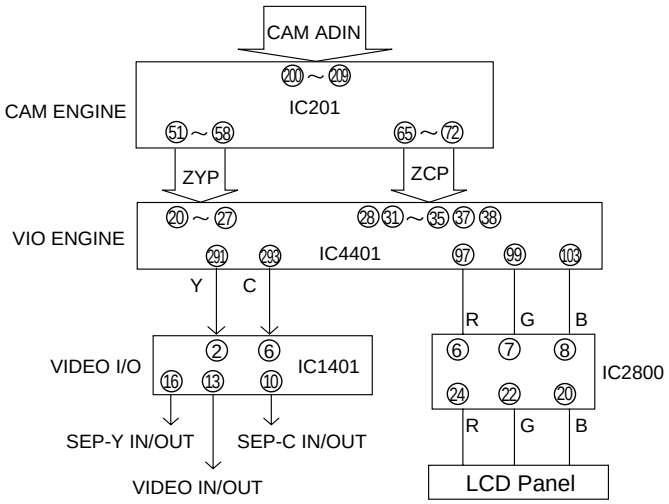
Camera (EE mode)



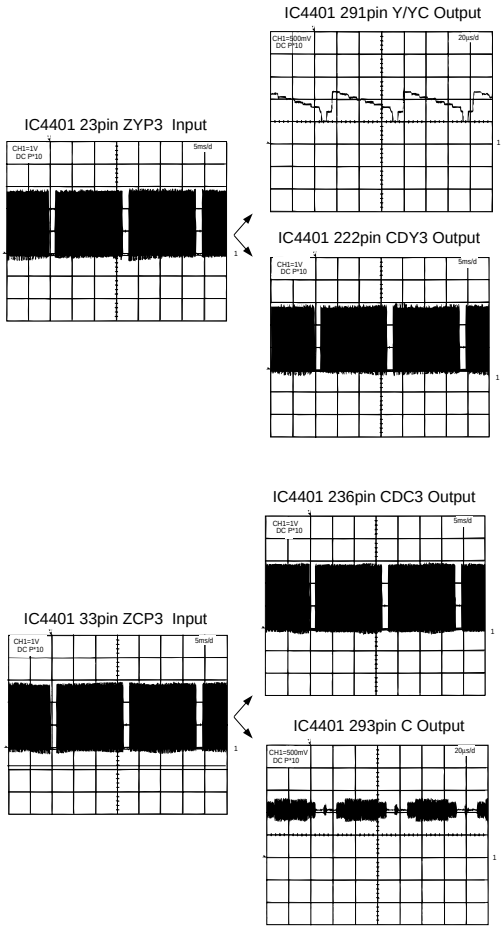
Major circuits to be checked
- Y data between CAM ENGINE (IC201) and VIO ENGINE (IC4401) is missing.

12. SIGNAL FLOW DIAGRAMS

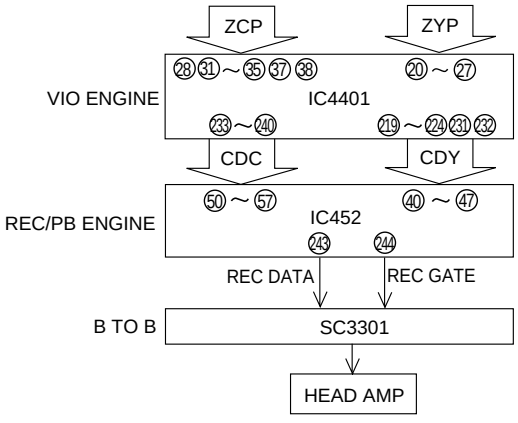
12-1. EE MODE FLOW (VIDEO)



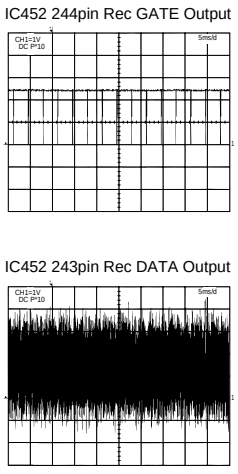
WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)


IC4401 291pin Y/YC Output
IC4401 23pin ZYP3 Input
IC4401 222pin CDY3 Output
IC4401 236pin CDC3 Output
IC4401 33pin ZCP3 Input
IC4401 293pin C Output

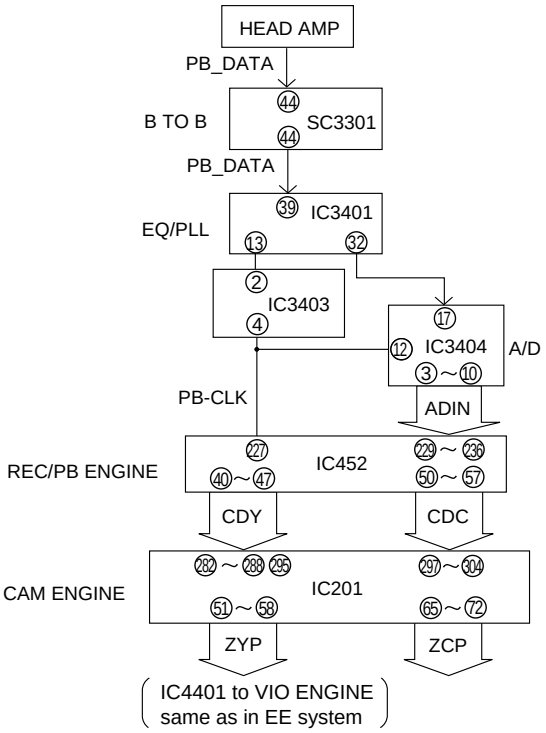
12-2. FLOW IN REC MODE (VIDEO)



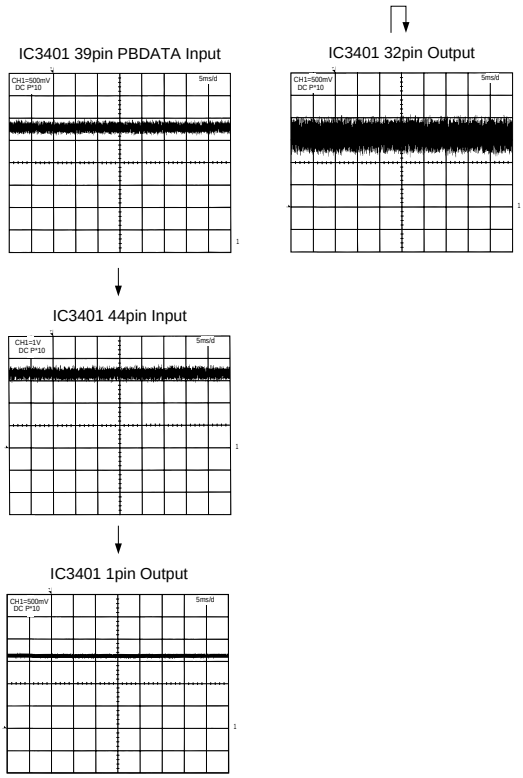
WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



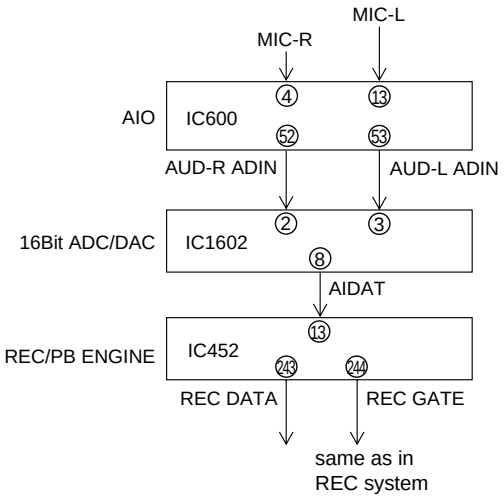
12-3. FLOW IN PB MODE (VIDEO)



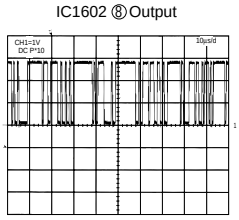
WAVEFORM DIAGRAM (DURING COLOR BAR PLAYBACK)



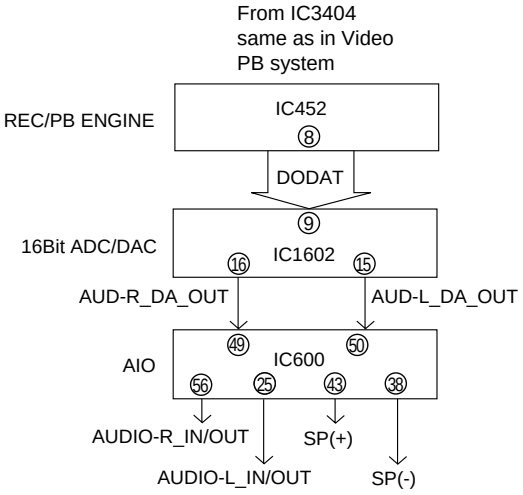
12-4. FLOW IN REC MODE (AUDIO)



WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)

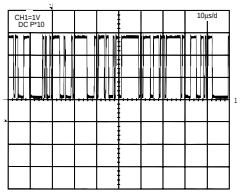


12-5. FLOW IN PB MODE (AUDIO)



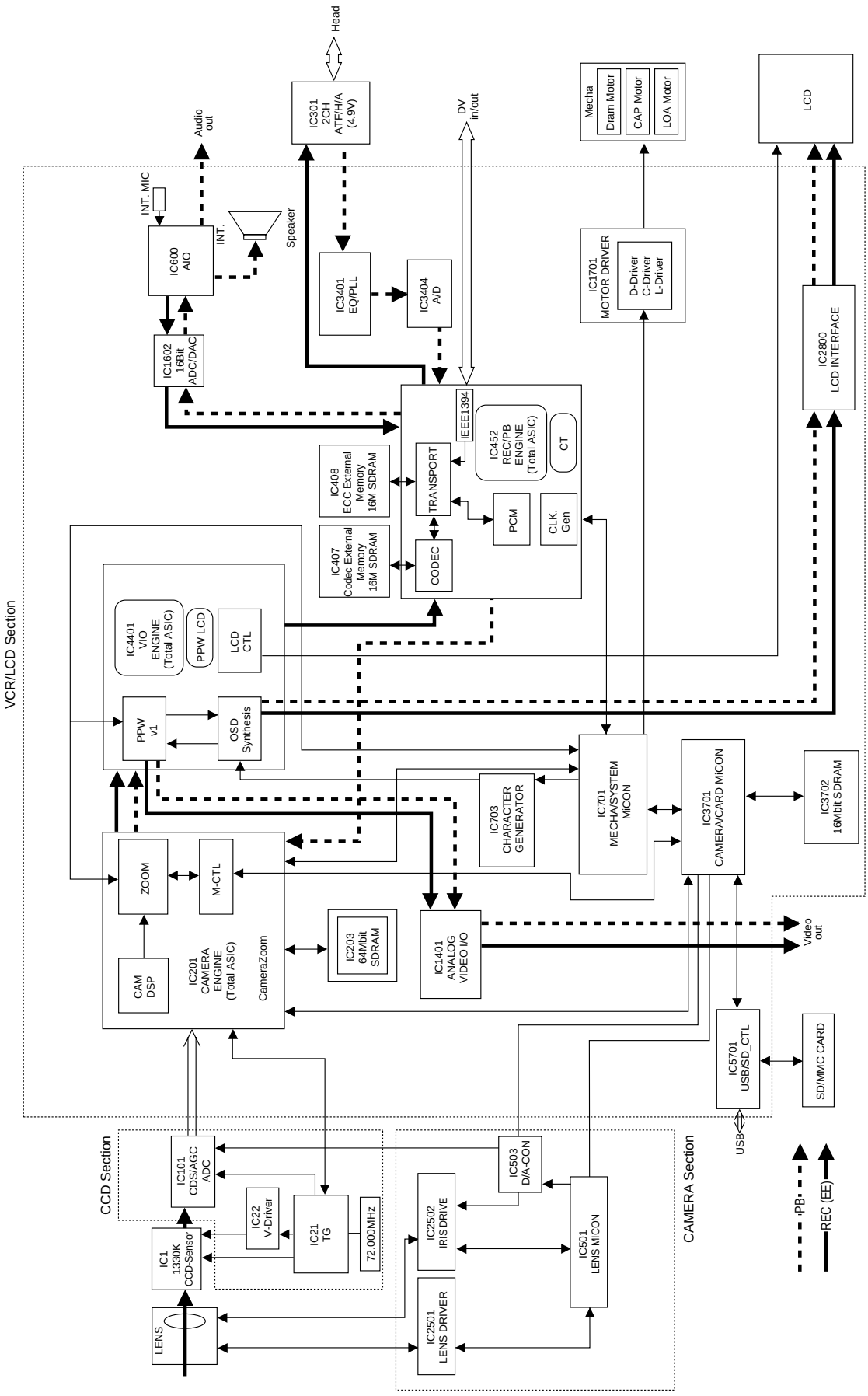
WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)

IC1602 ⑨ DODAT Input

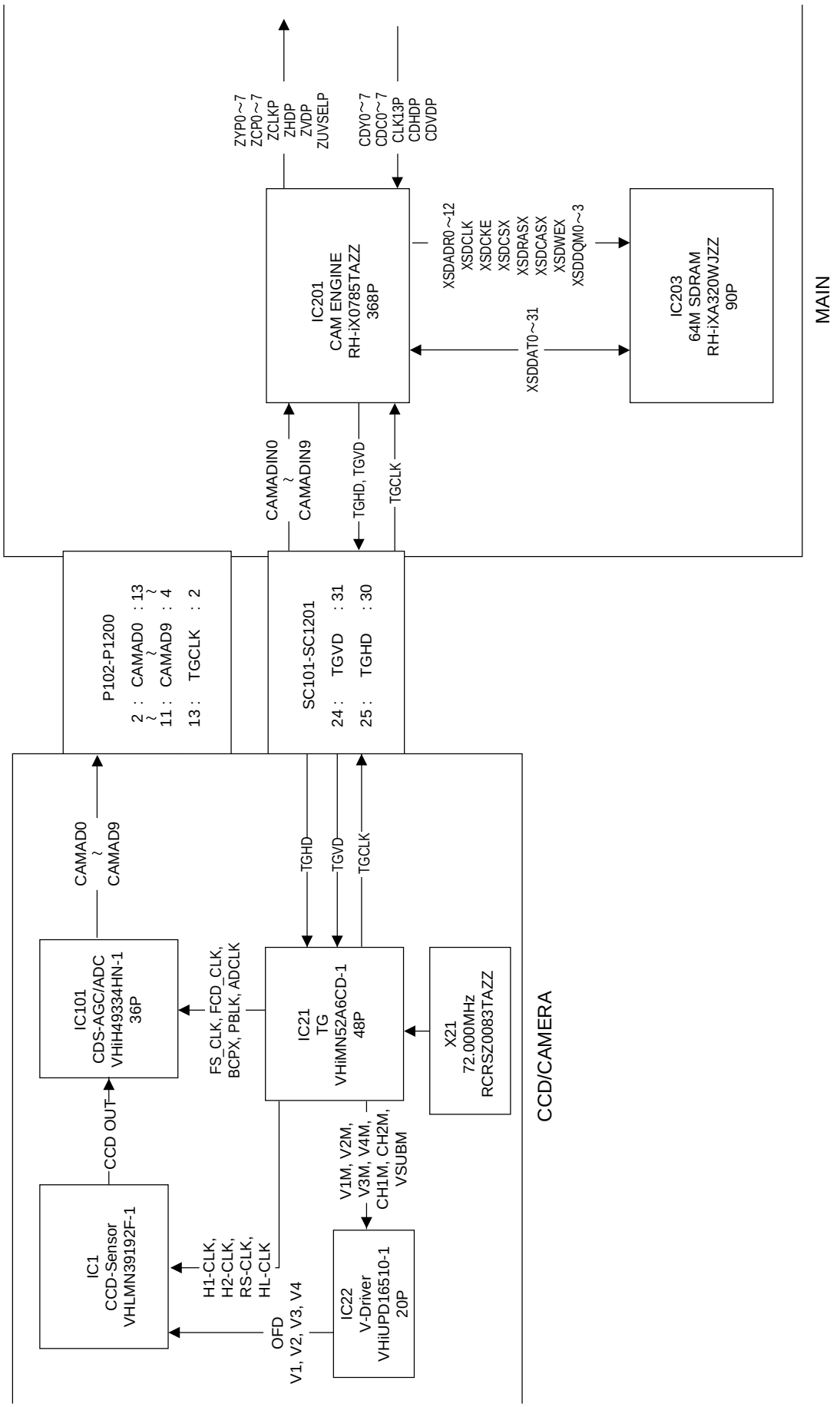


13. BLOCK DIAGRAMS

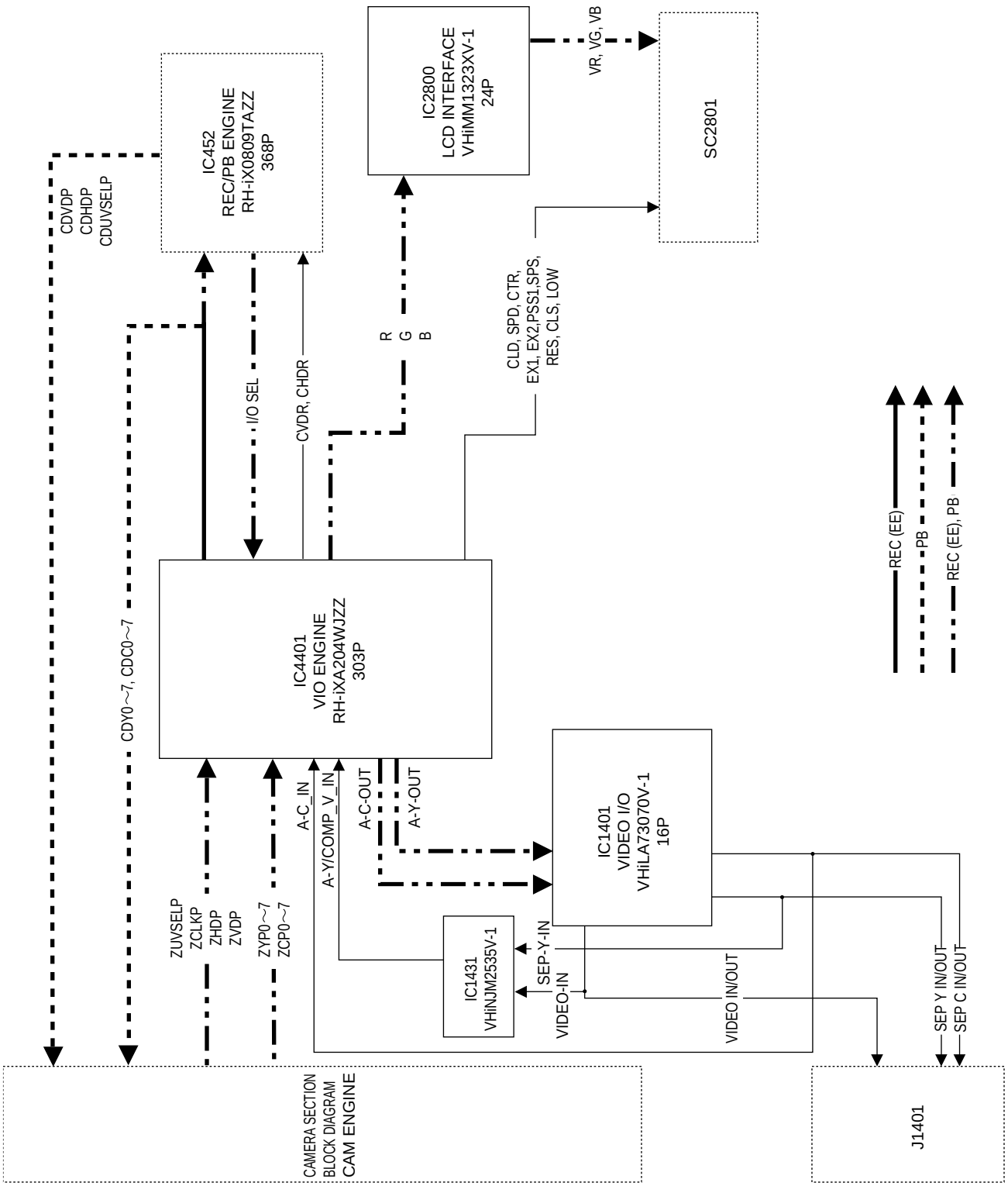
13-1. SYSTEM BLOCK DIAGRAM



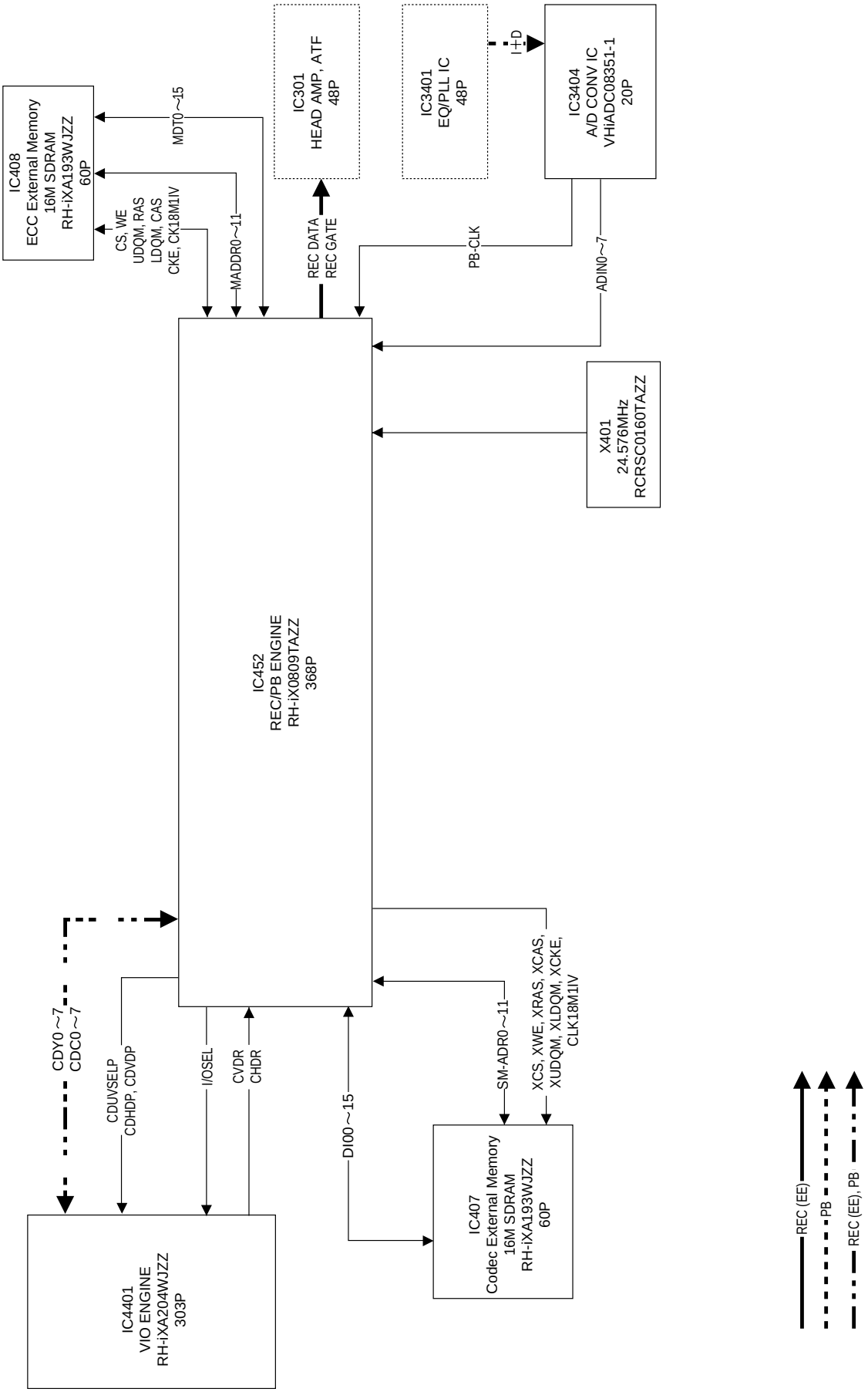
13-2. CAMERA SECTION BLOCK DIAGRAM



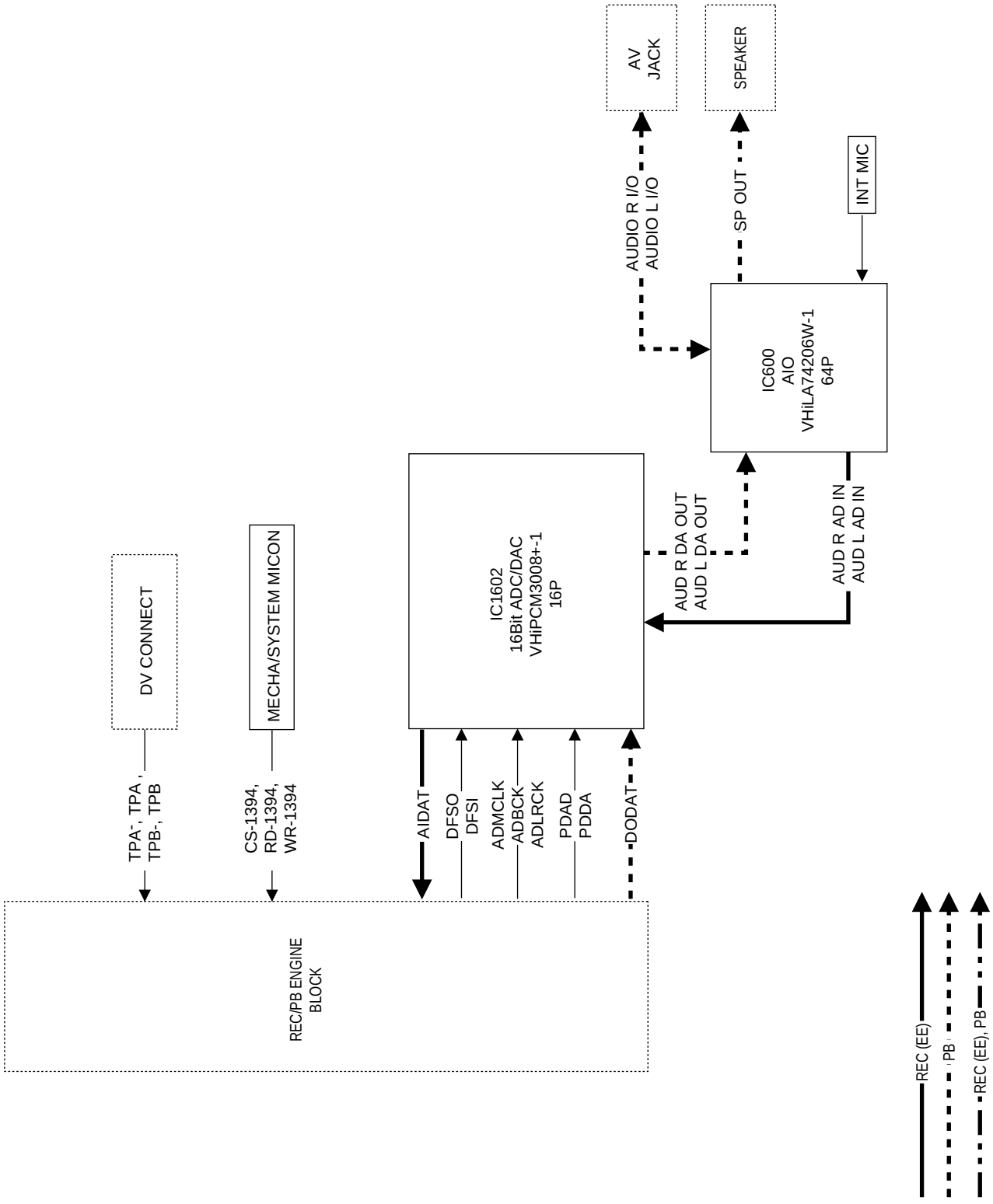
13-3. VIO ENGINE SECTION BLOCK DIAGRAM



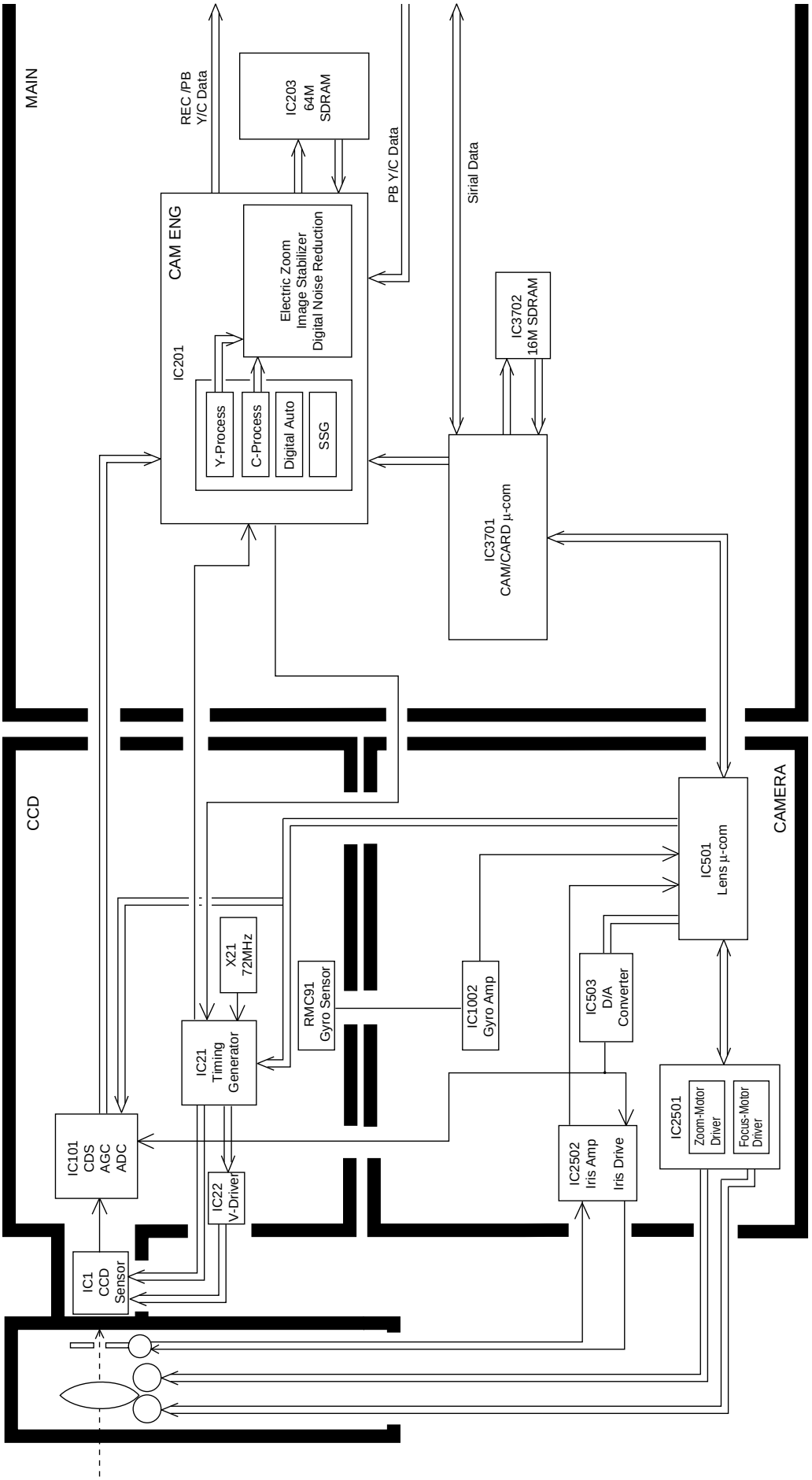
13-4. REC/PB SECTION BLOCK DIAGRAM



13-5. AUDIO/DIGITAL OUTPUT SECTION BLOCK DIAGRAM

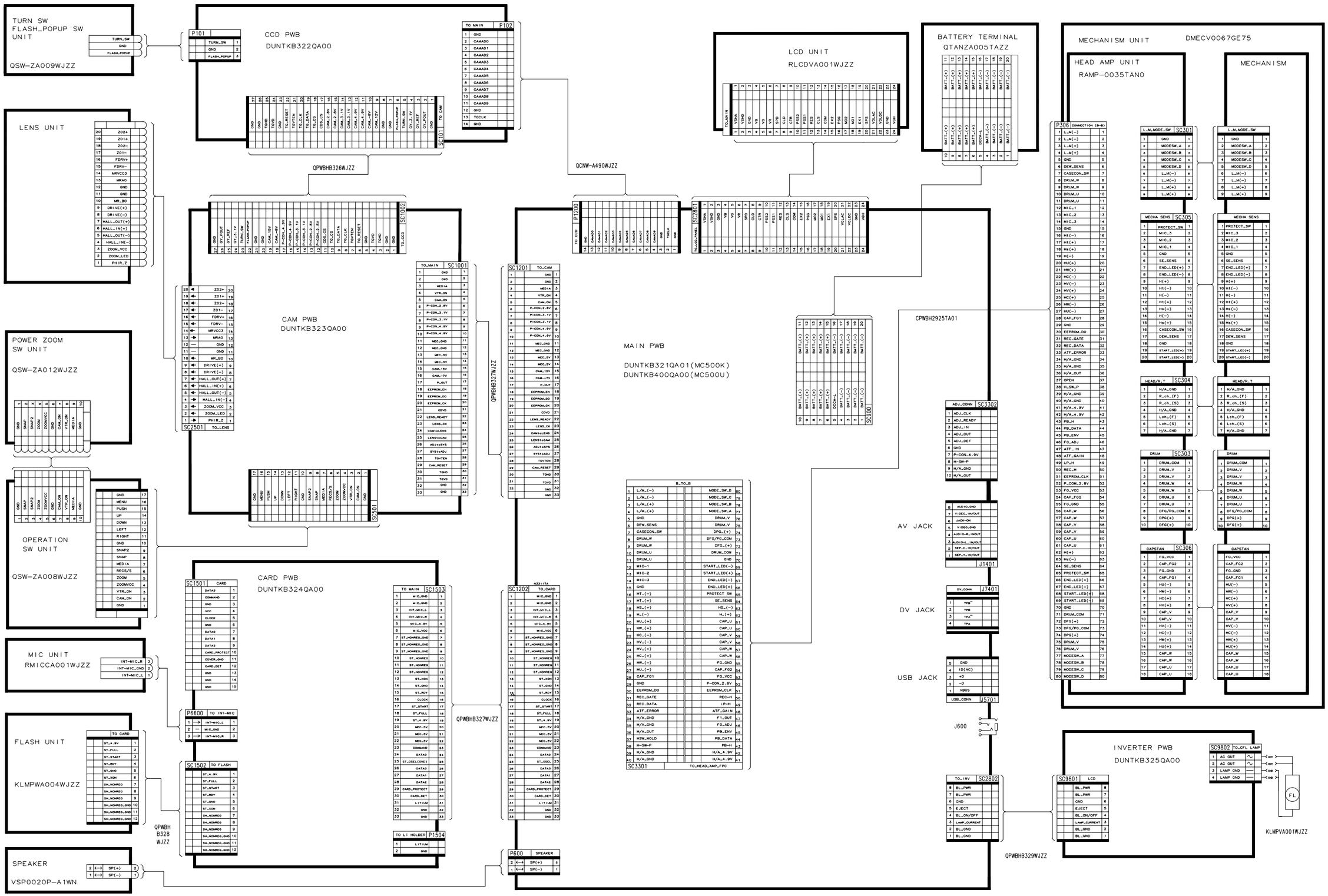


13-6. CAMERA CIRCUIT BLOCK DIAGRAM

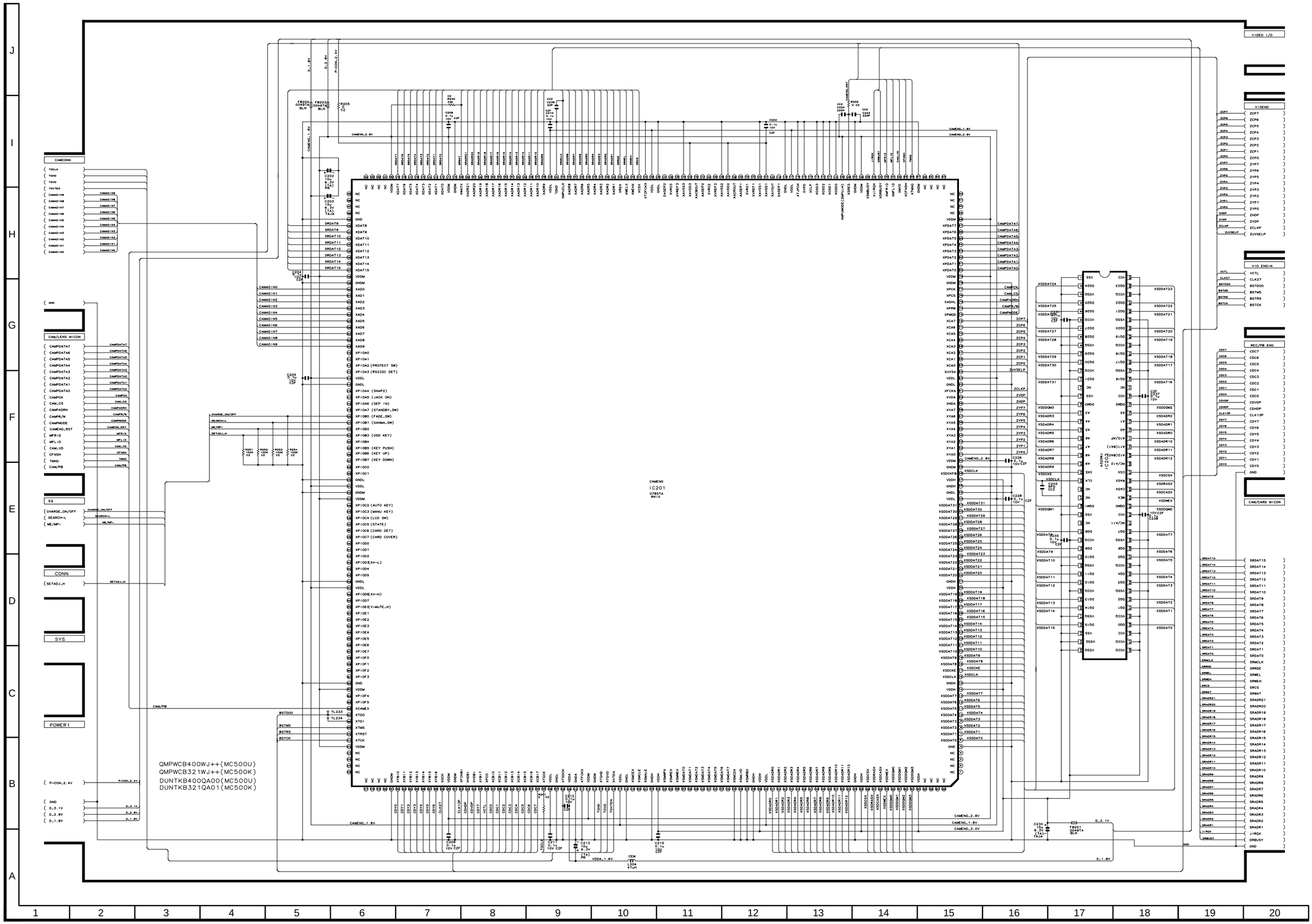


- M E M O -

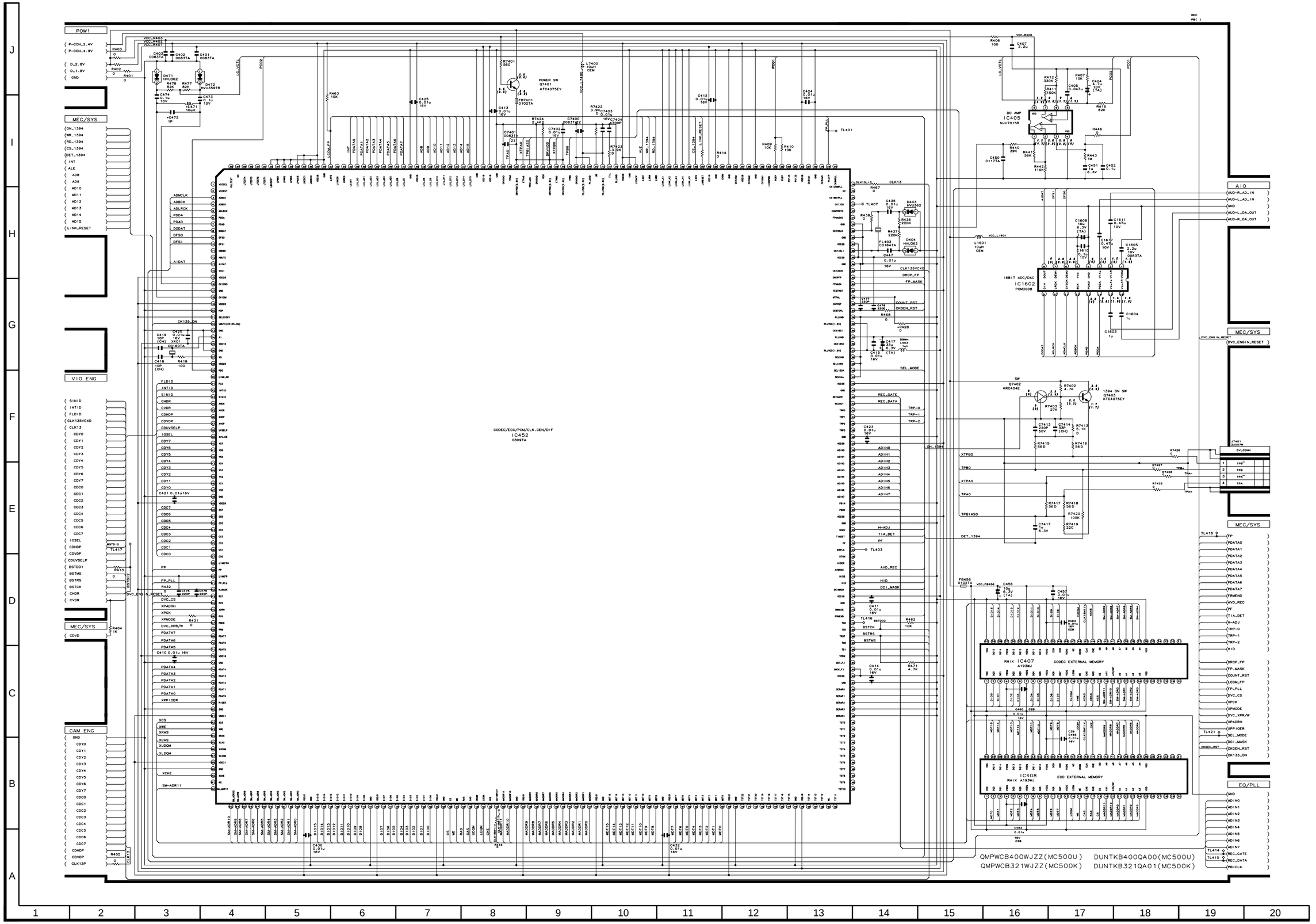
14. SCHEMATIC DIAGRAMS 14-1. OVERALL SCHEMATIC DIAGRAM



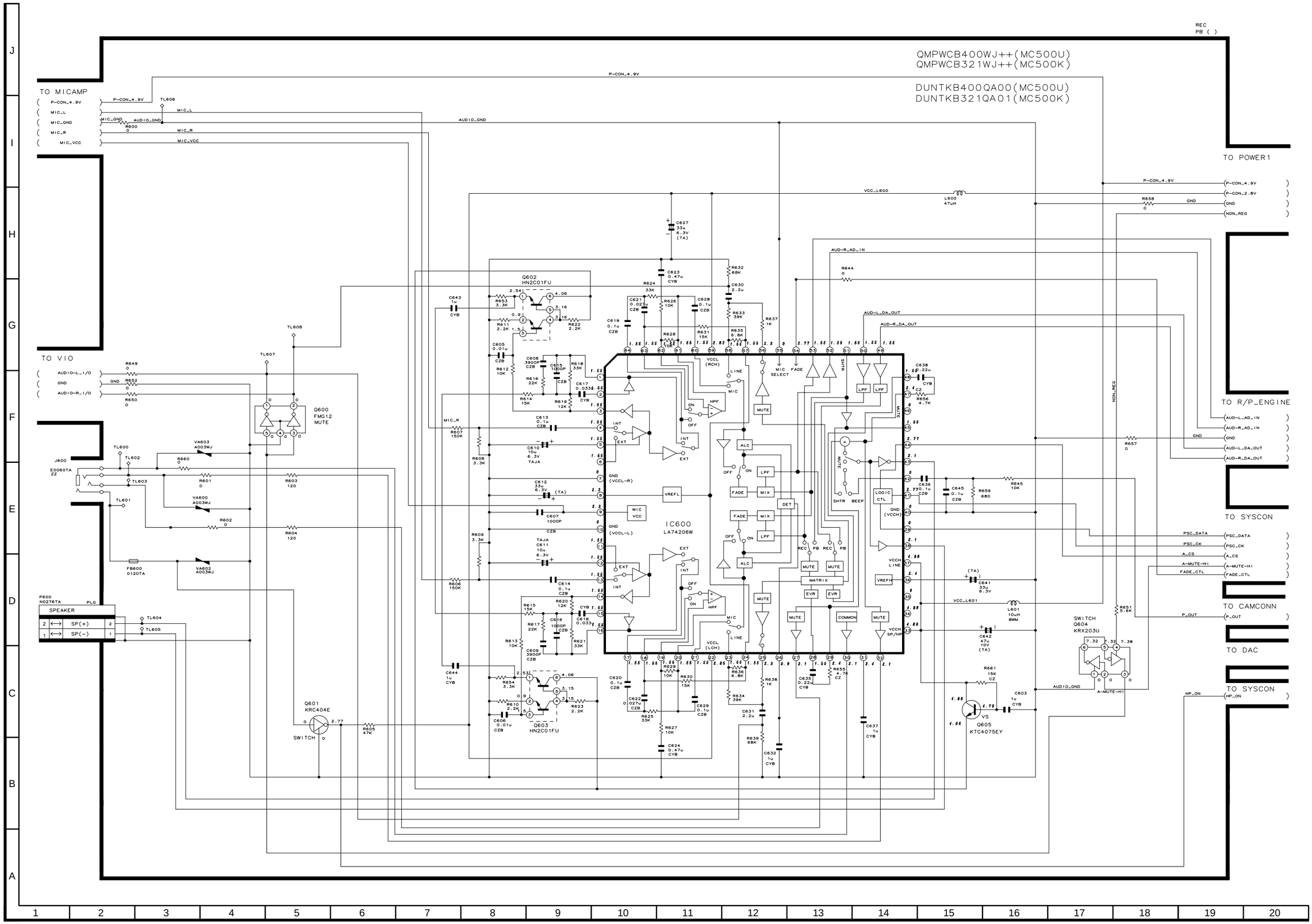
14-2. CAMERA ENGINE SCHEMATIC DIAGRAM



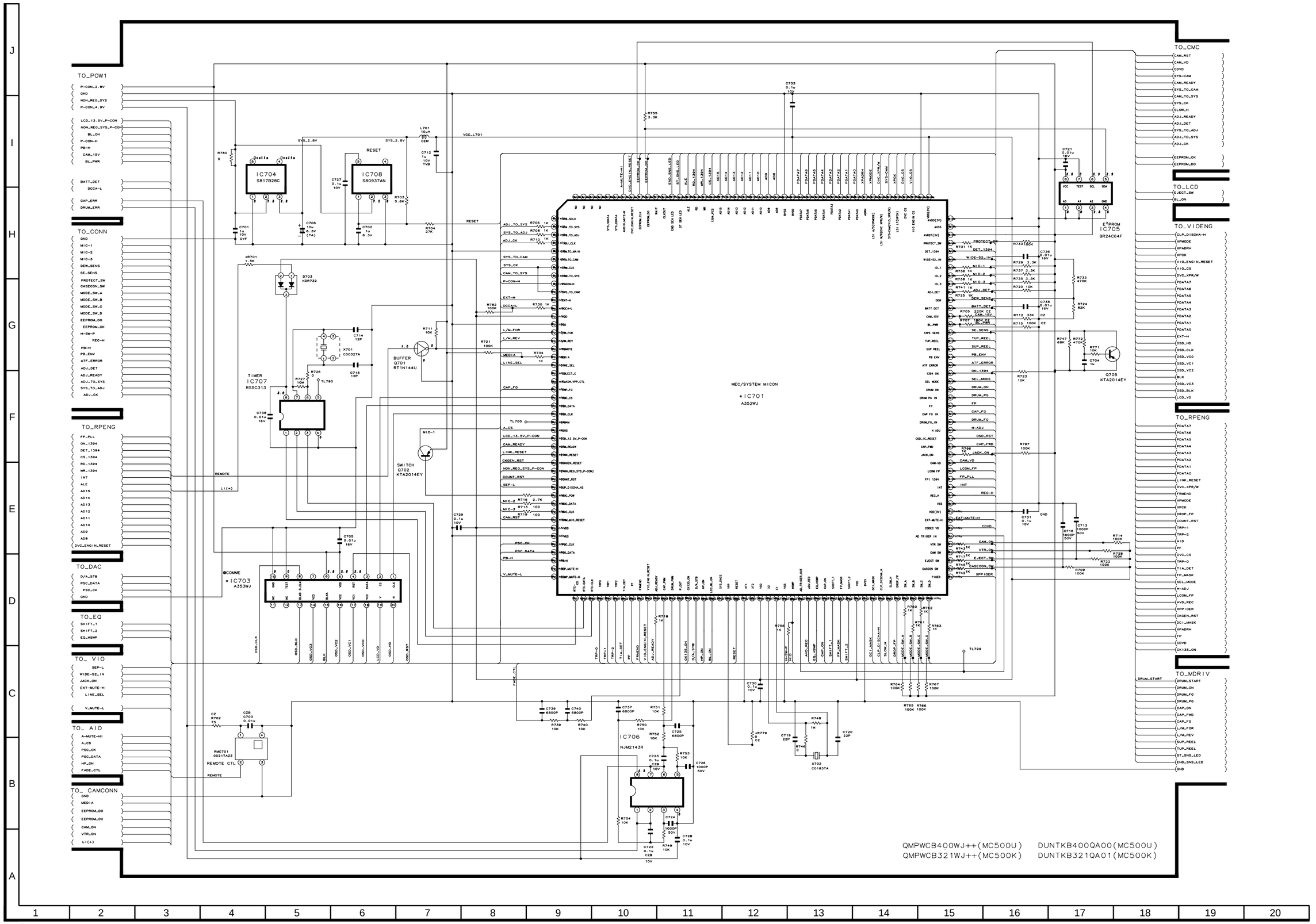
14-3. REC/PB ENGINE SCHEMATIC DIAGRAM



14-4. AUDIO I/O SCHEMATIC DIAGRAM

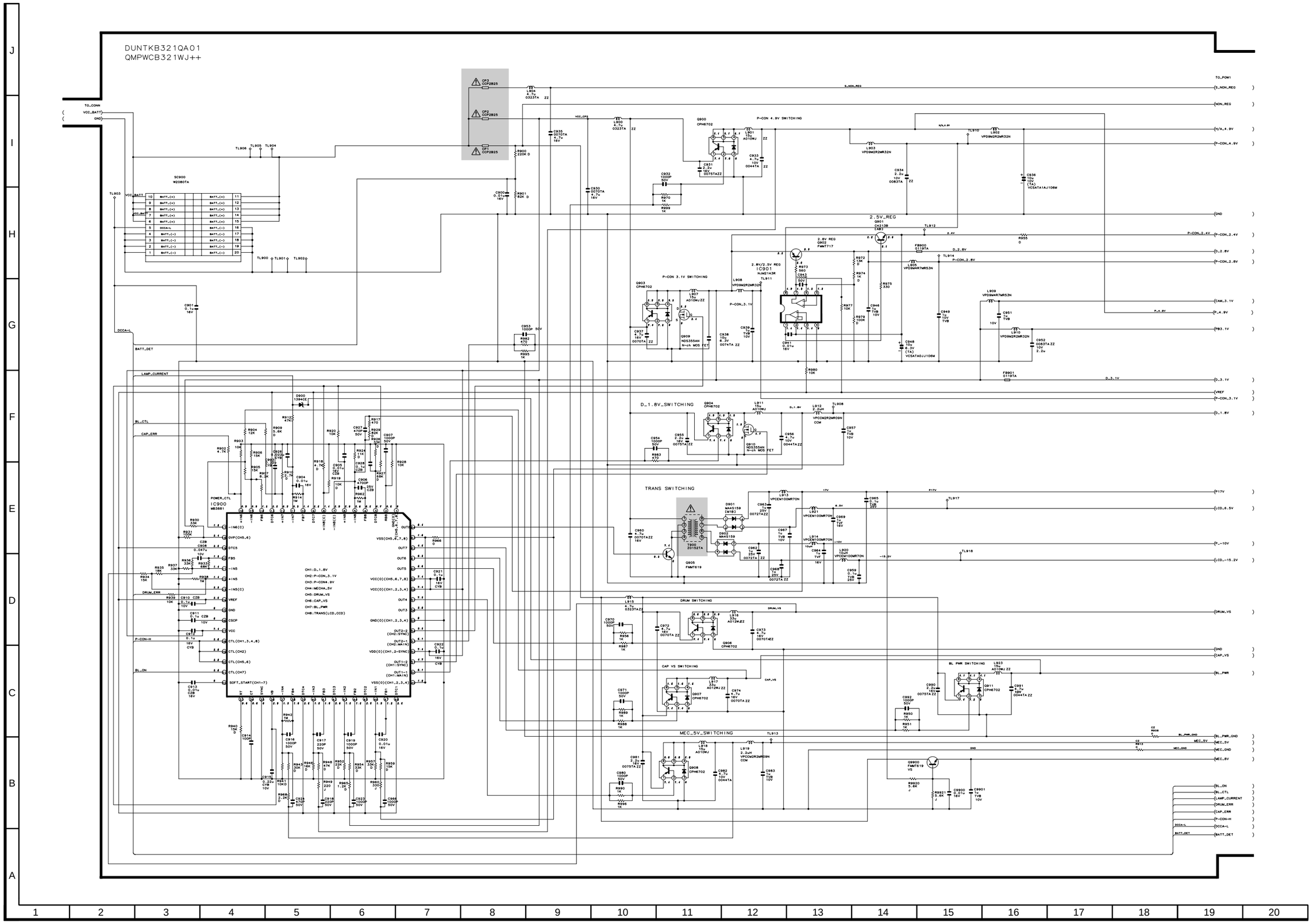


14-5. MEC/SYS MiCON SCHEMATIC DIAGRAM



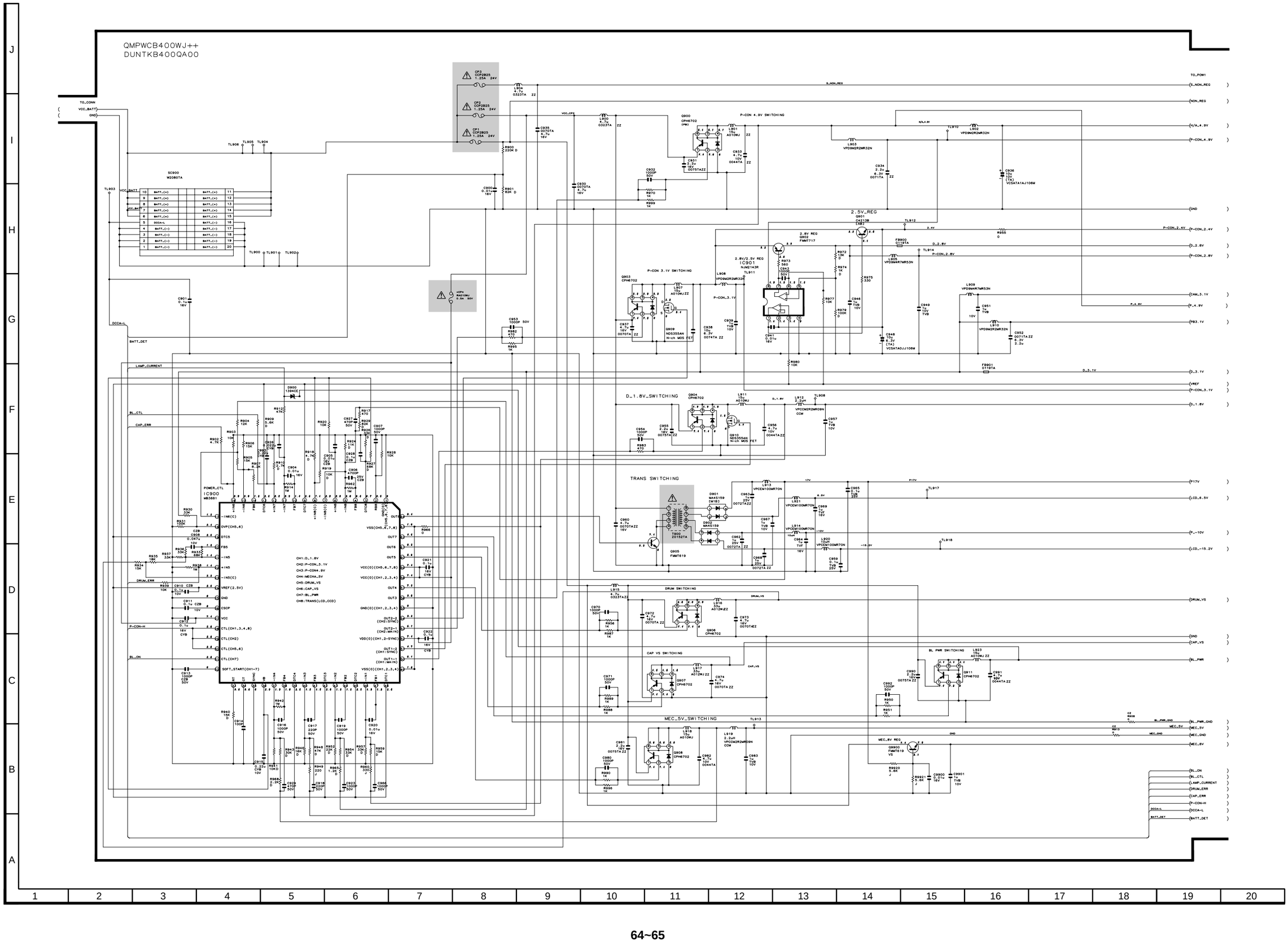
14-6. POWER2 SCHEMATIC DIAGRAM (VL-MC500K)

⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS

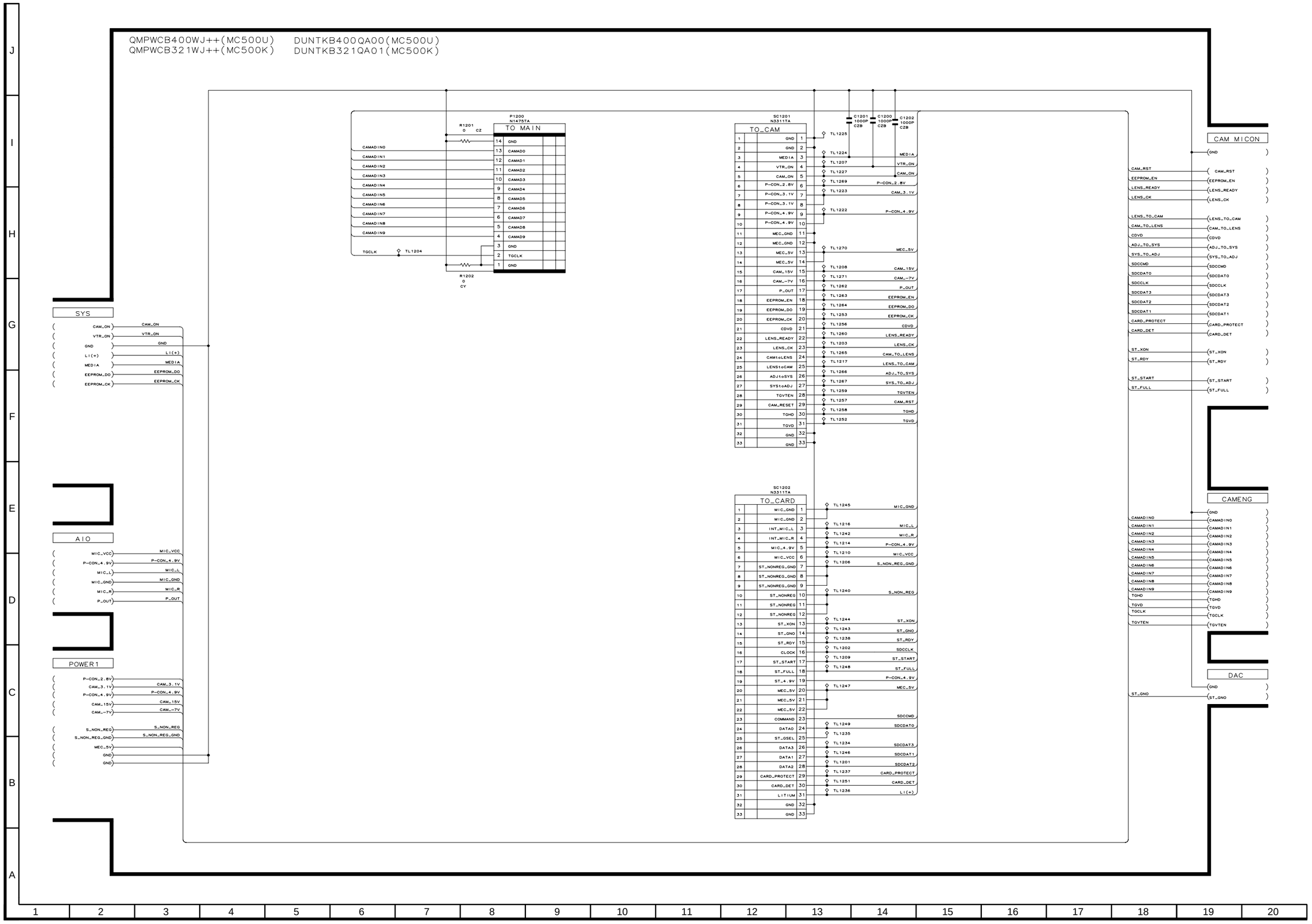


14-7. POWER2 SCHEMATIC DIAGRAM (VL-MC500U)

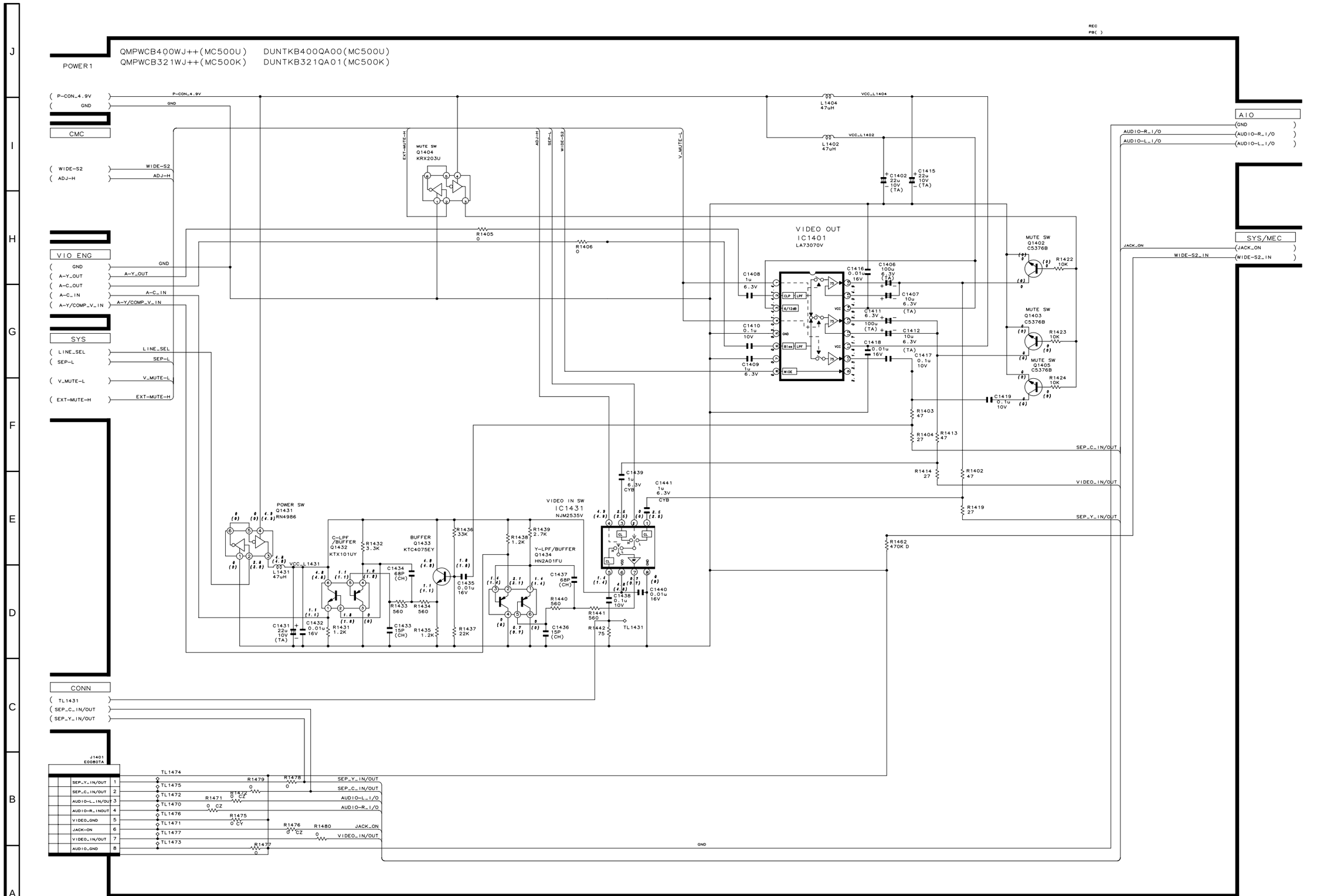
⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS



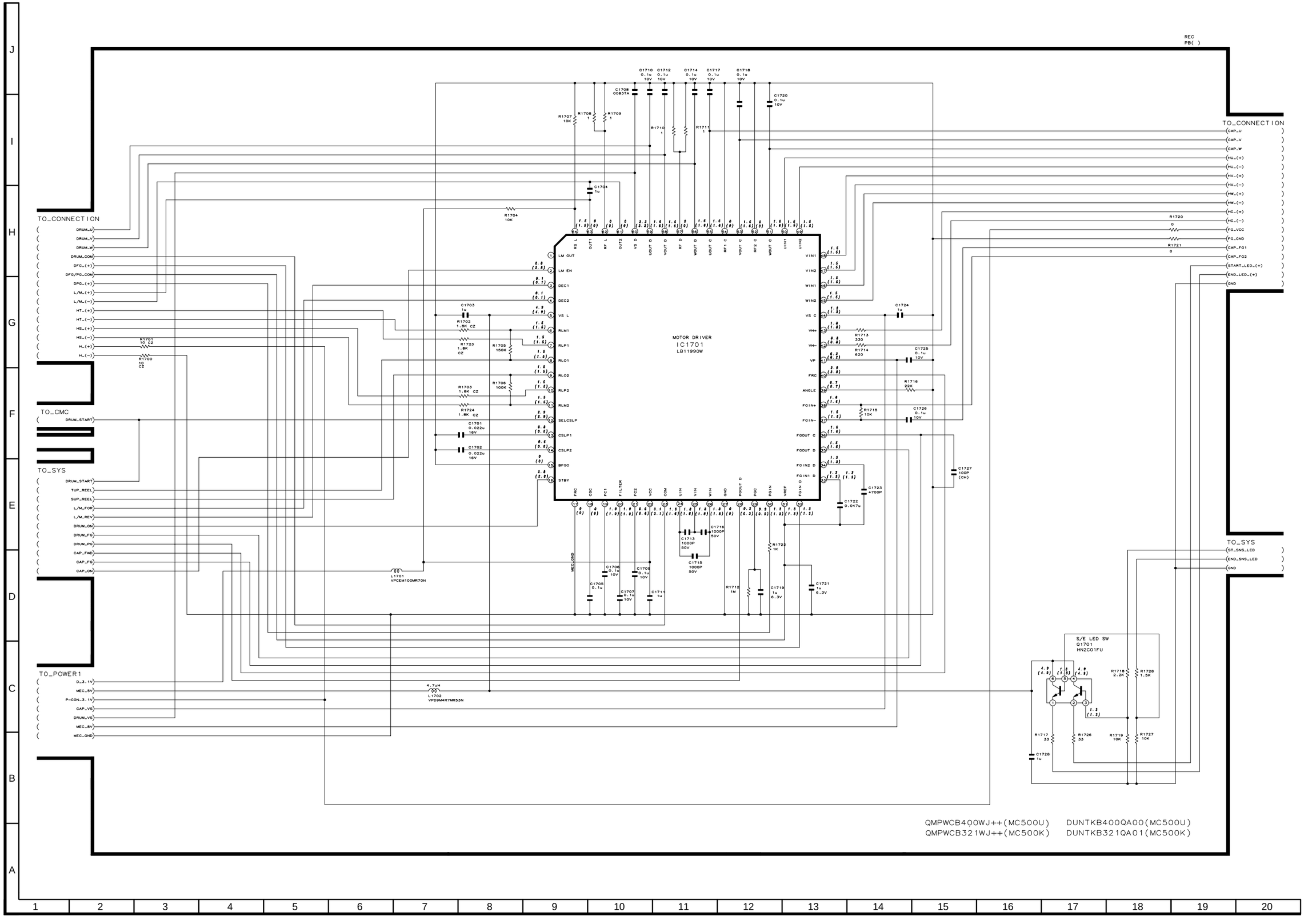
14-8. CAMERA CONN SCHEMATIC DIAGRAM



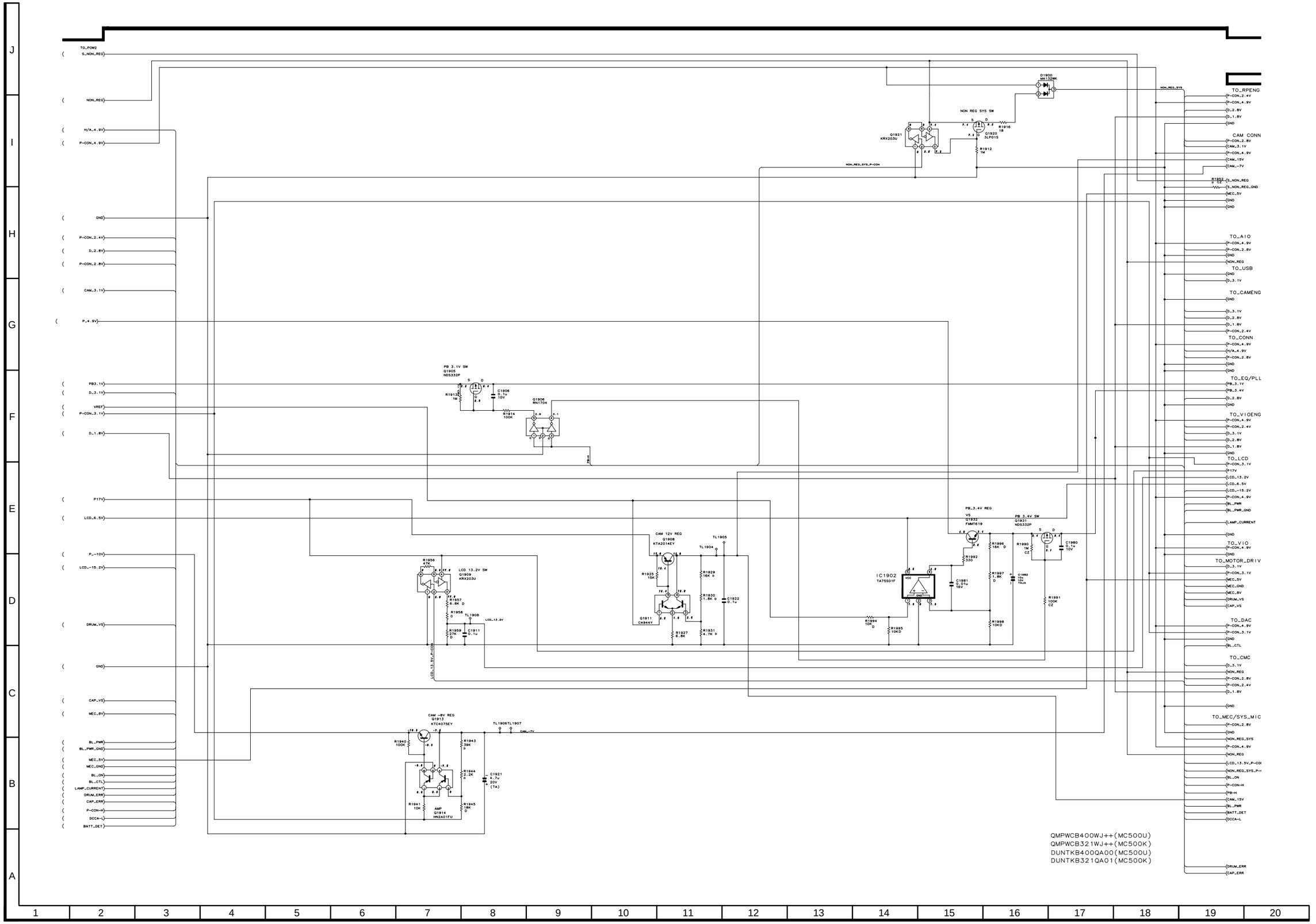
14-9. VIDEO I/O SCHEMATIC DIAGRAM



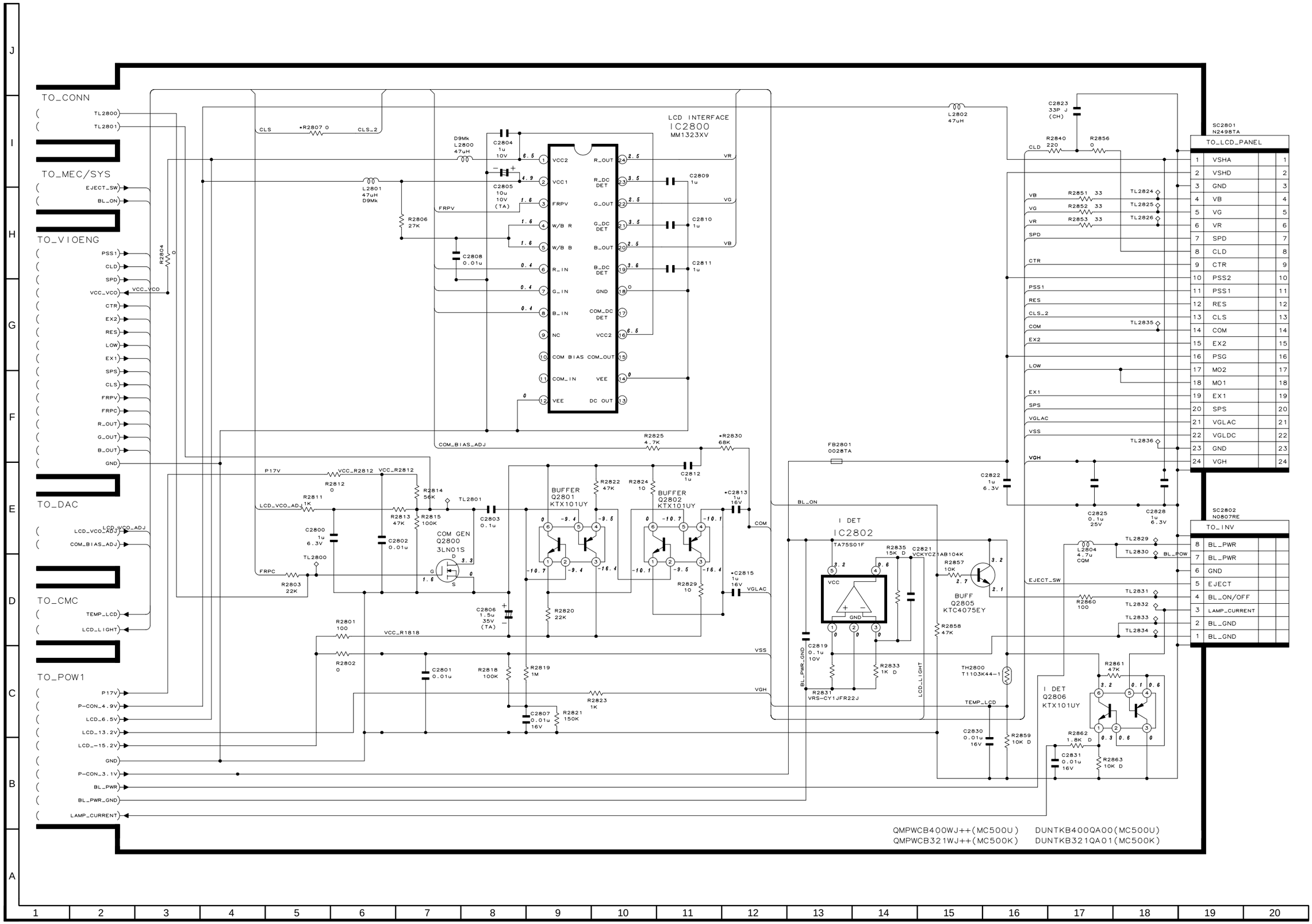
14-10. MOTOR DRIVER SCHEMATIC DIAGRAM



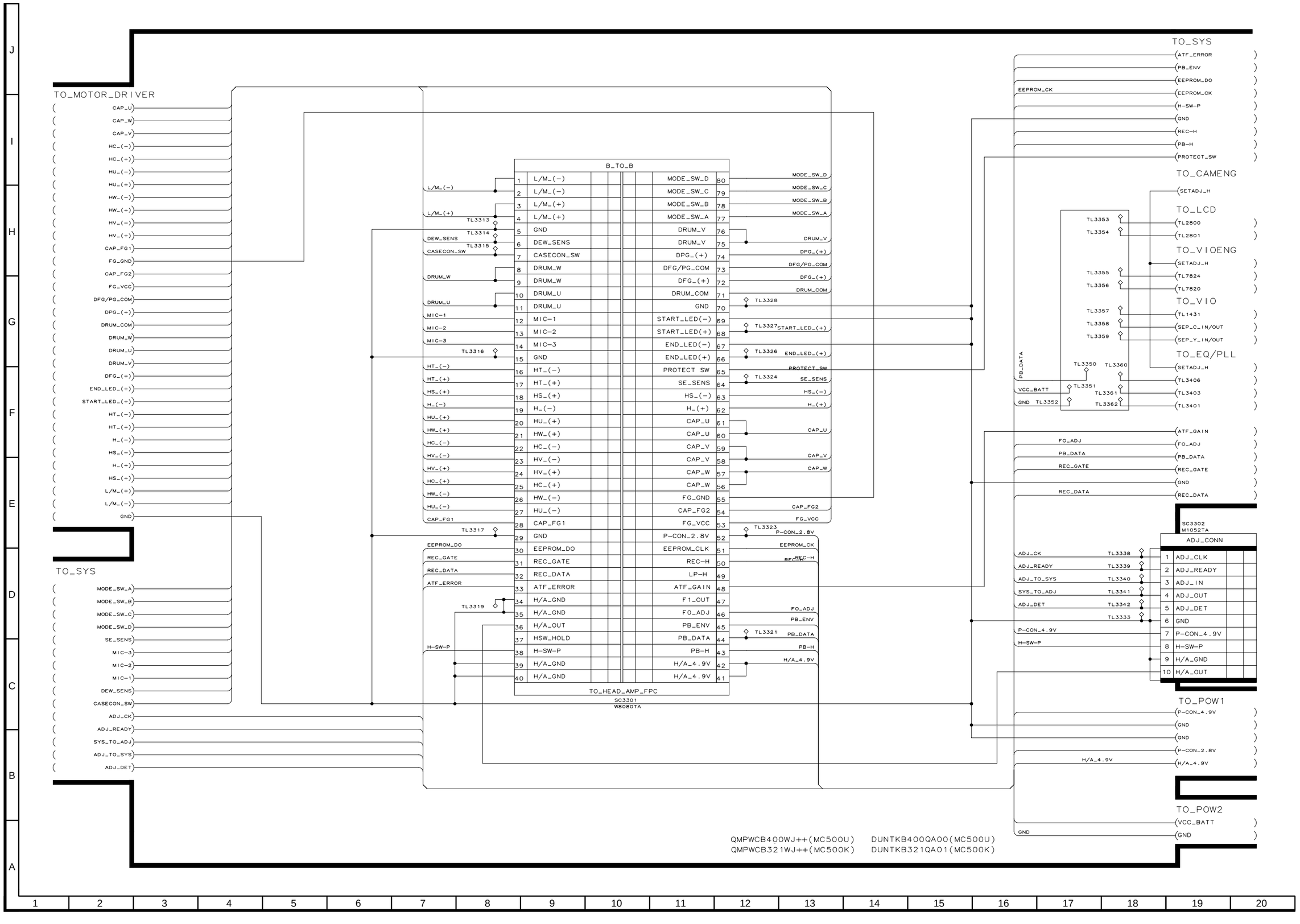
14-11. POWER1 SCHEMATIC DIAGRAM



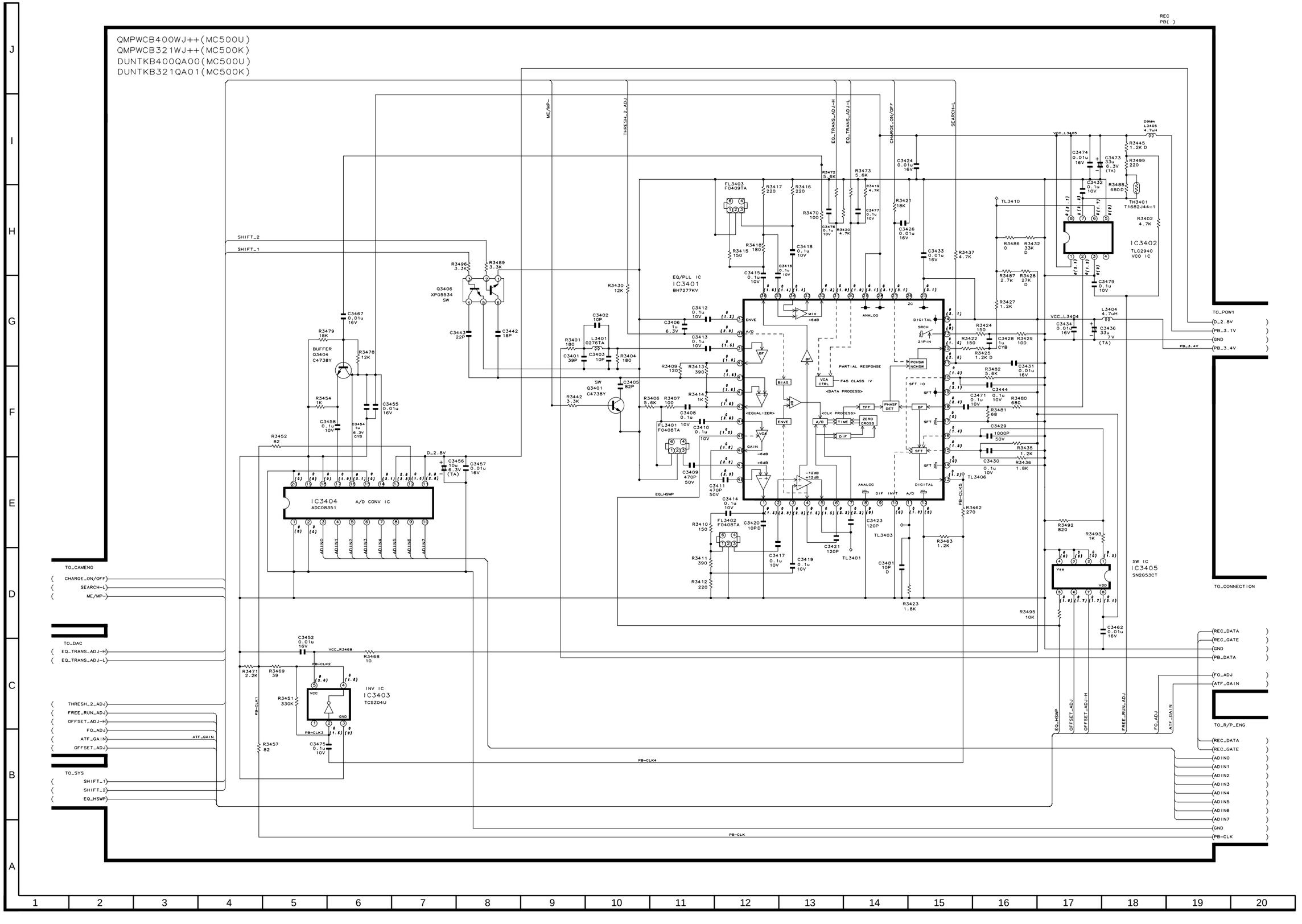
14-12. LCD SCHEMATIC DIAGRAM



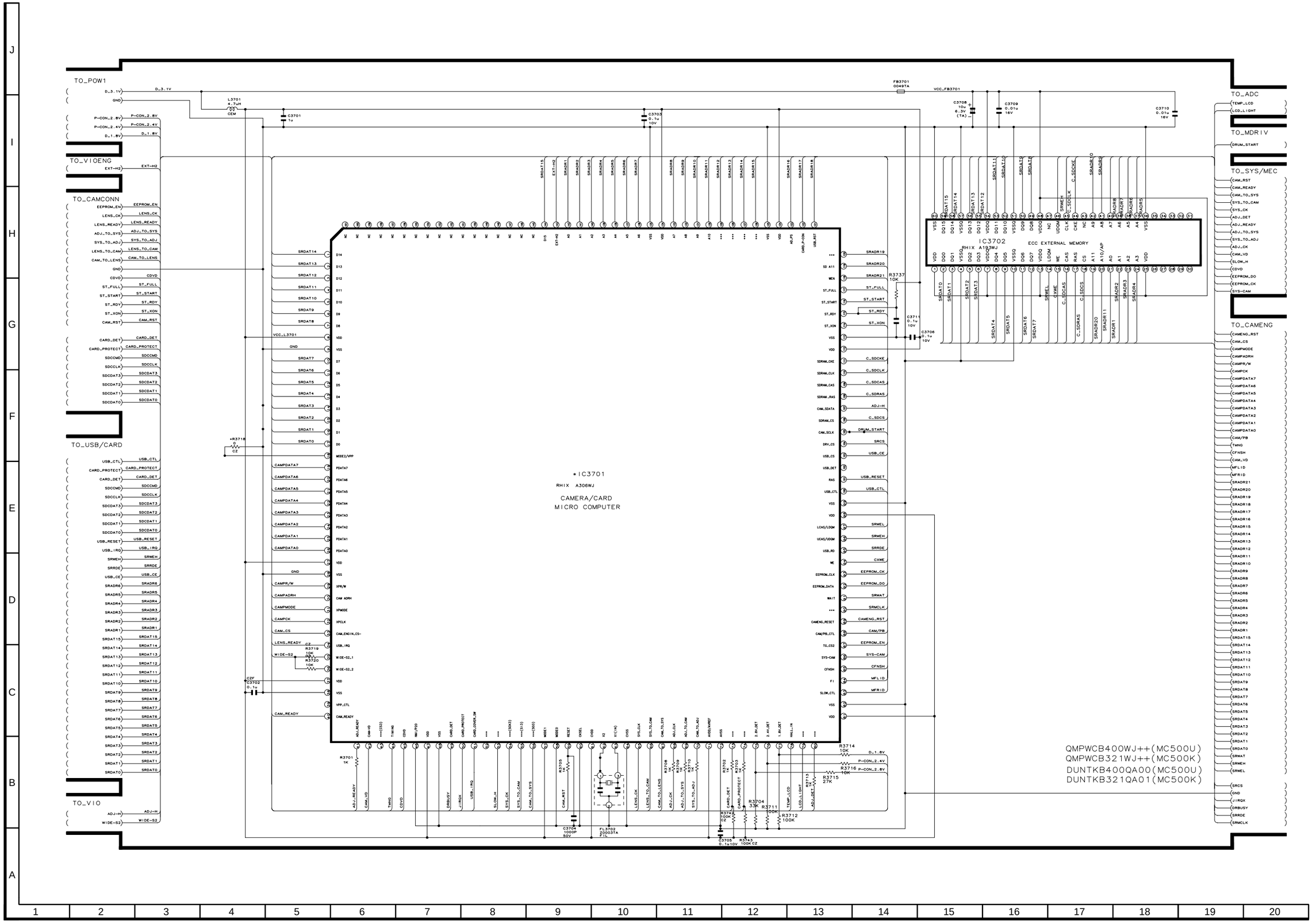
14-13. CONNECTION(B-B) SCHEMATIC DIAGRAM



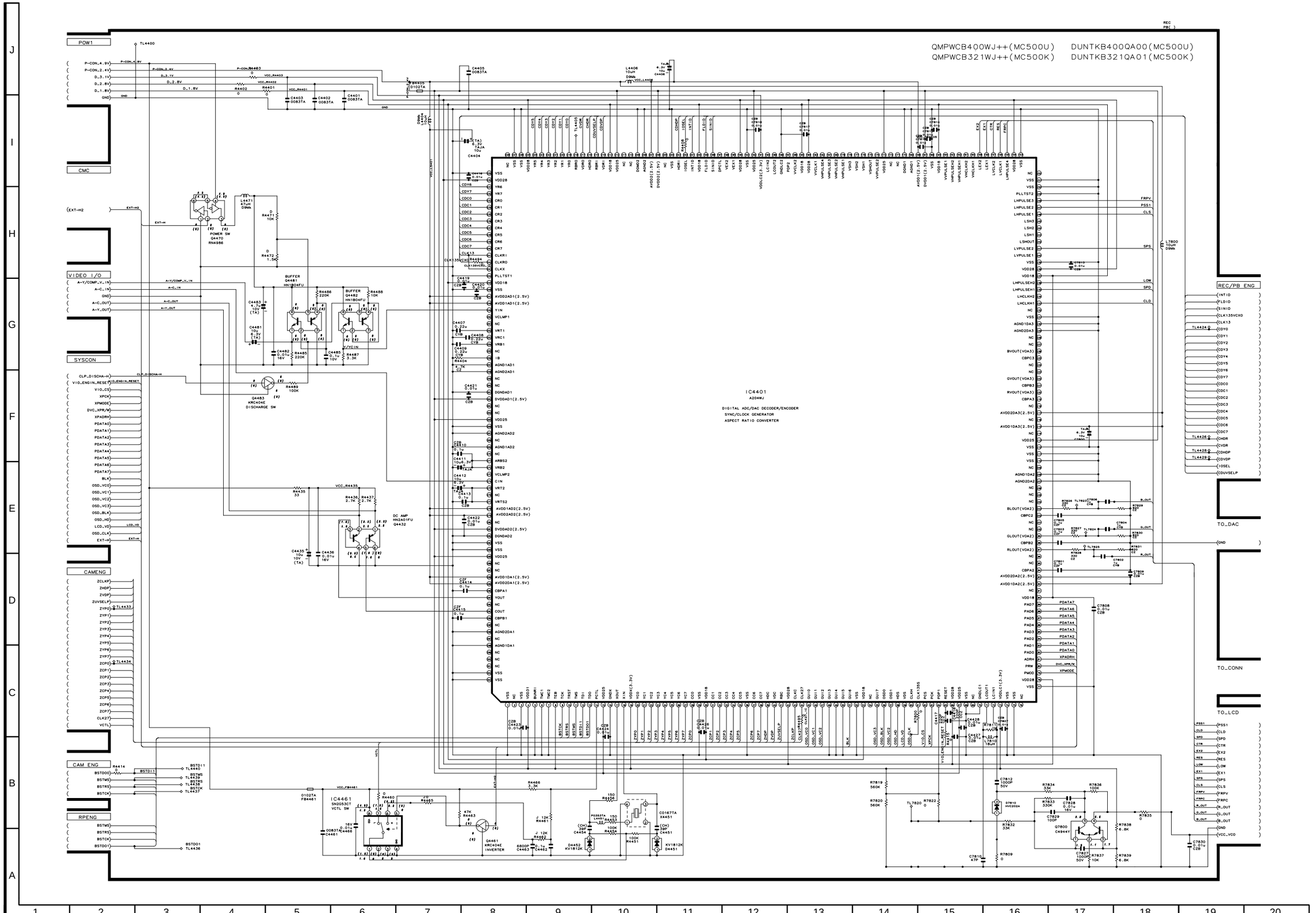
14-14. EQ/PLL SCHEMATIC DIAGRAM



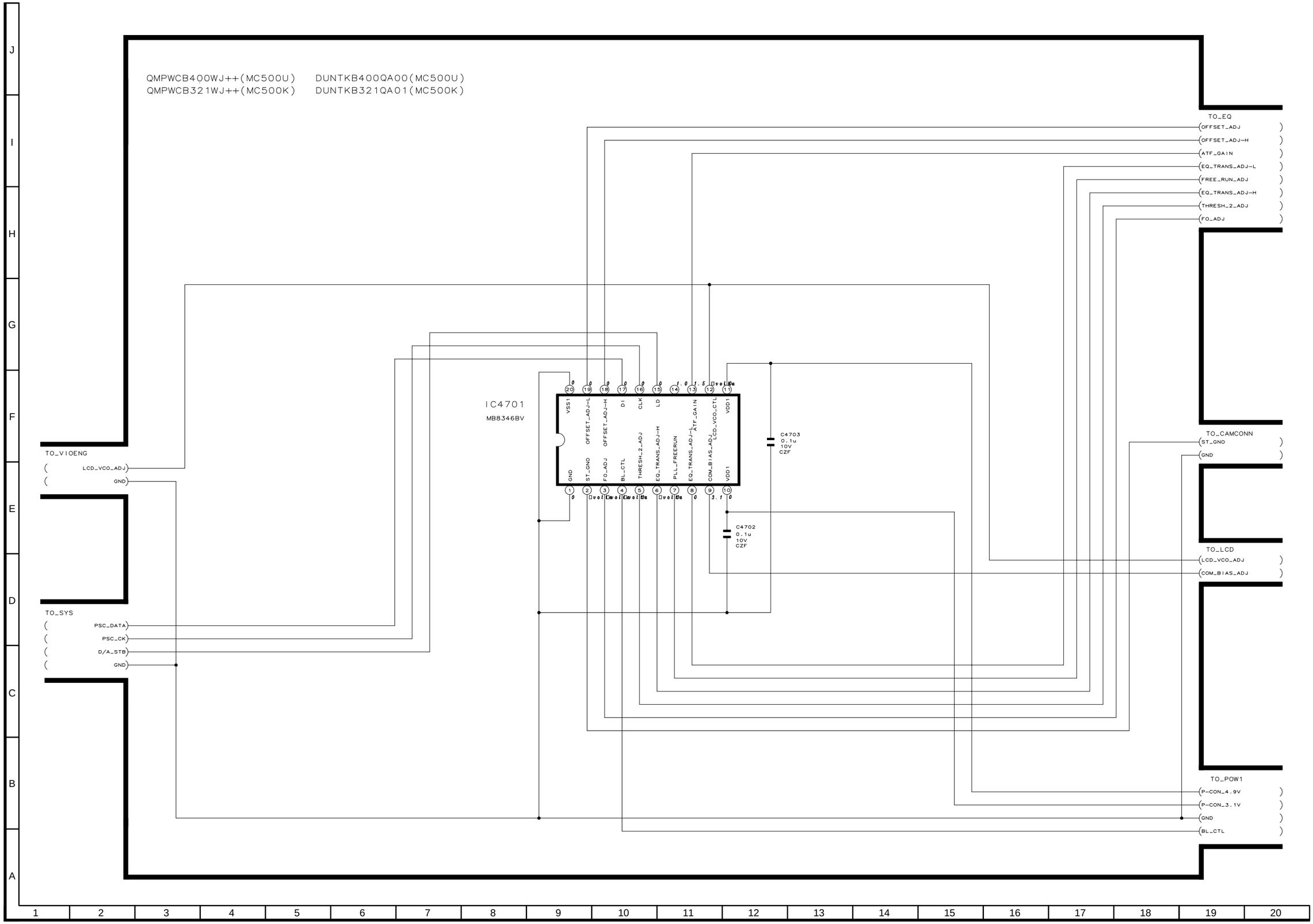
14-15. CAM/CARD MiCON SCHEMATIC DIAGRAM



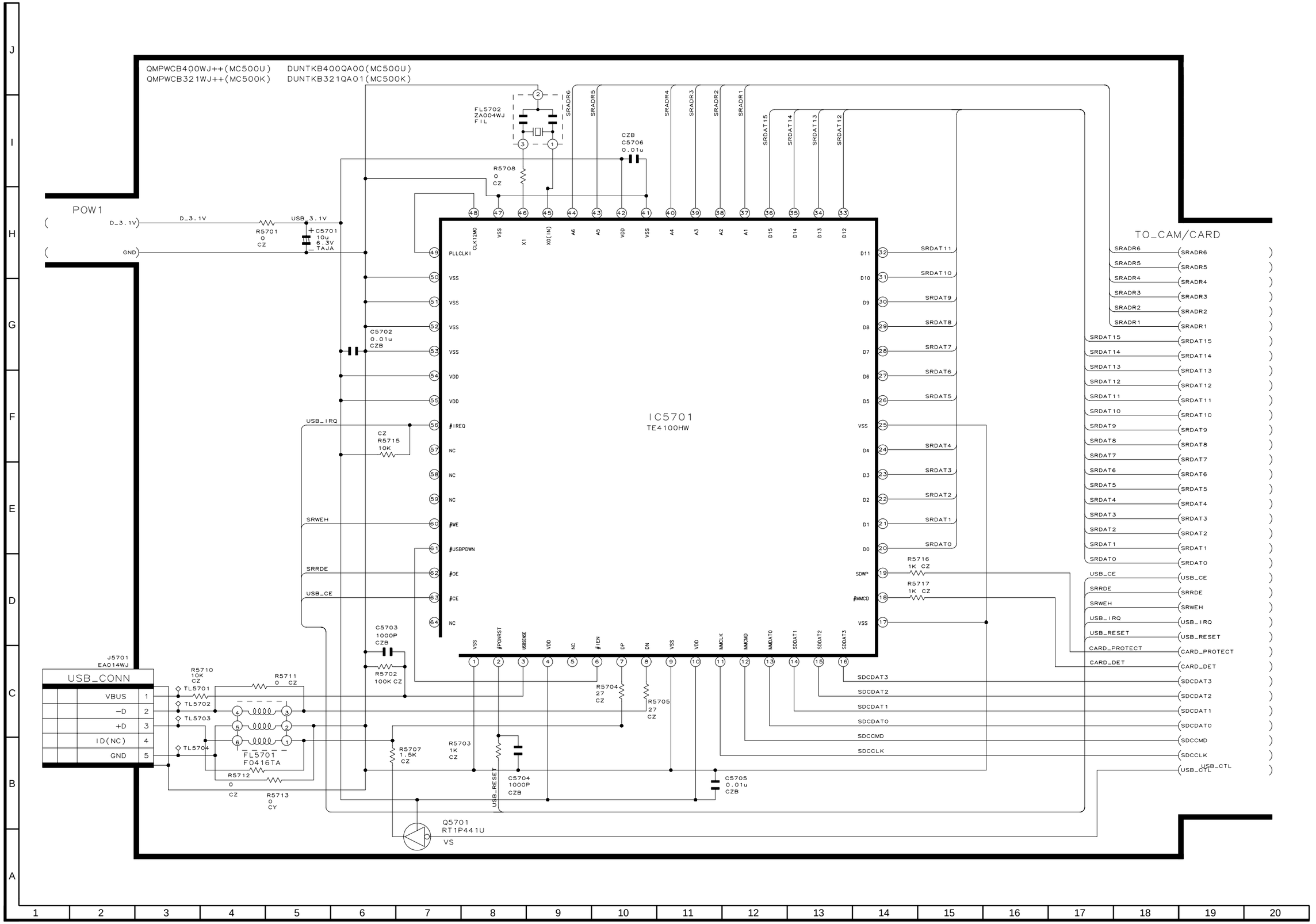
14-16. VIDEO I/O ENGINE SCHEMATIC DIAGRAM



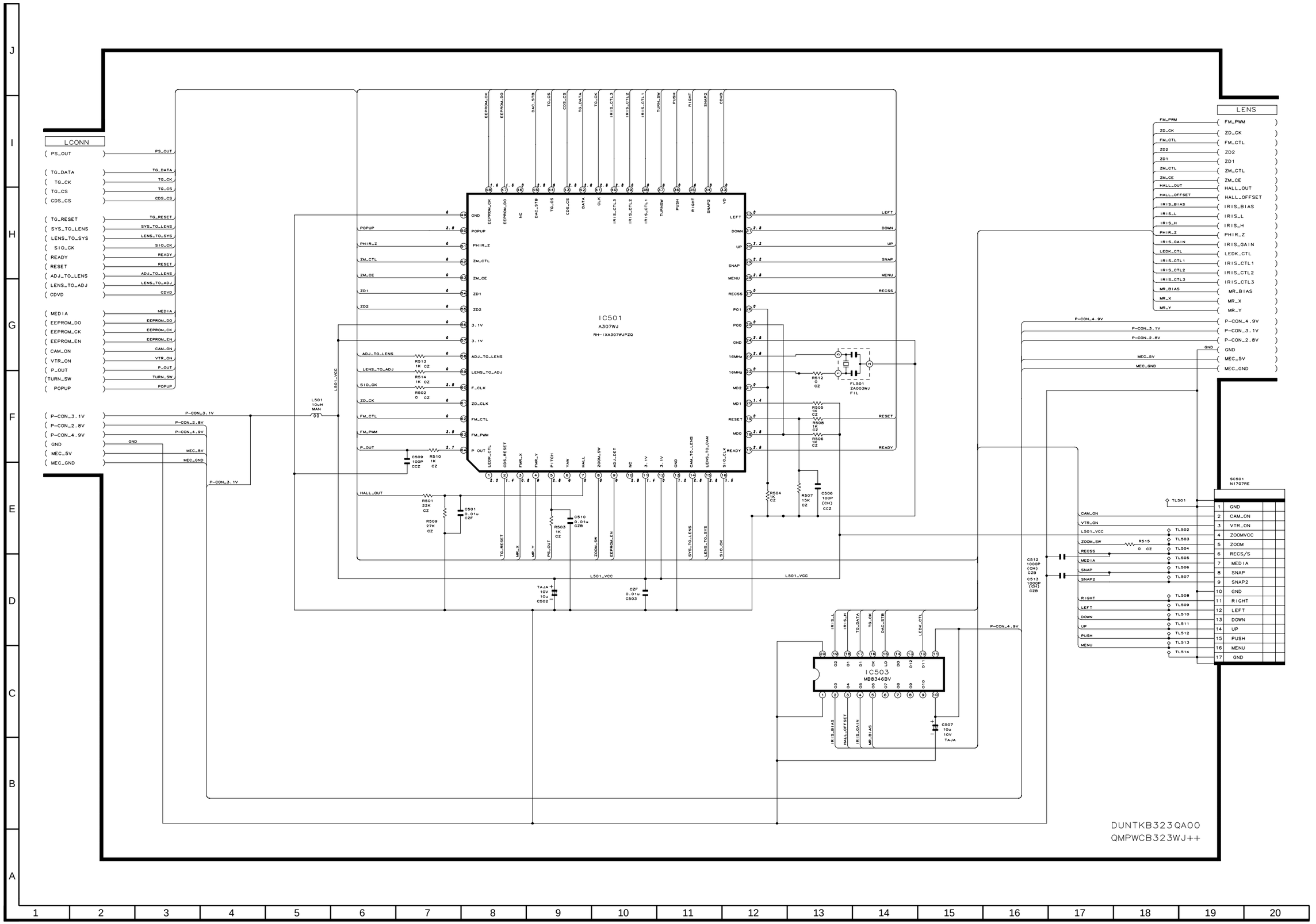
14-17. DAC SCHEMATIC DIAGRAM



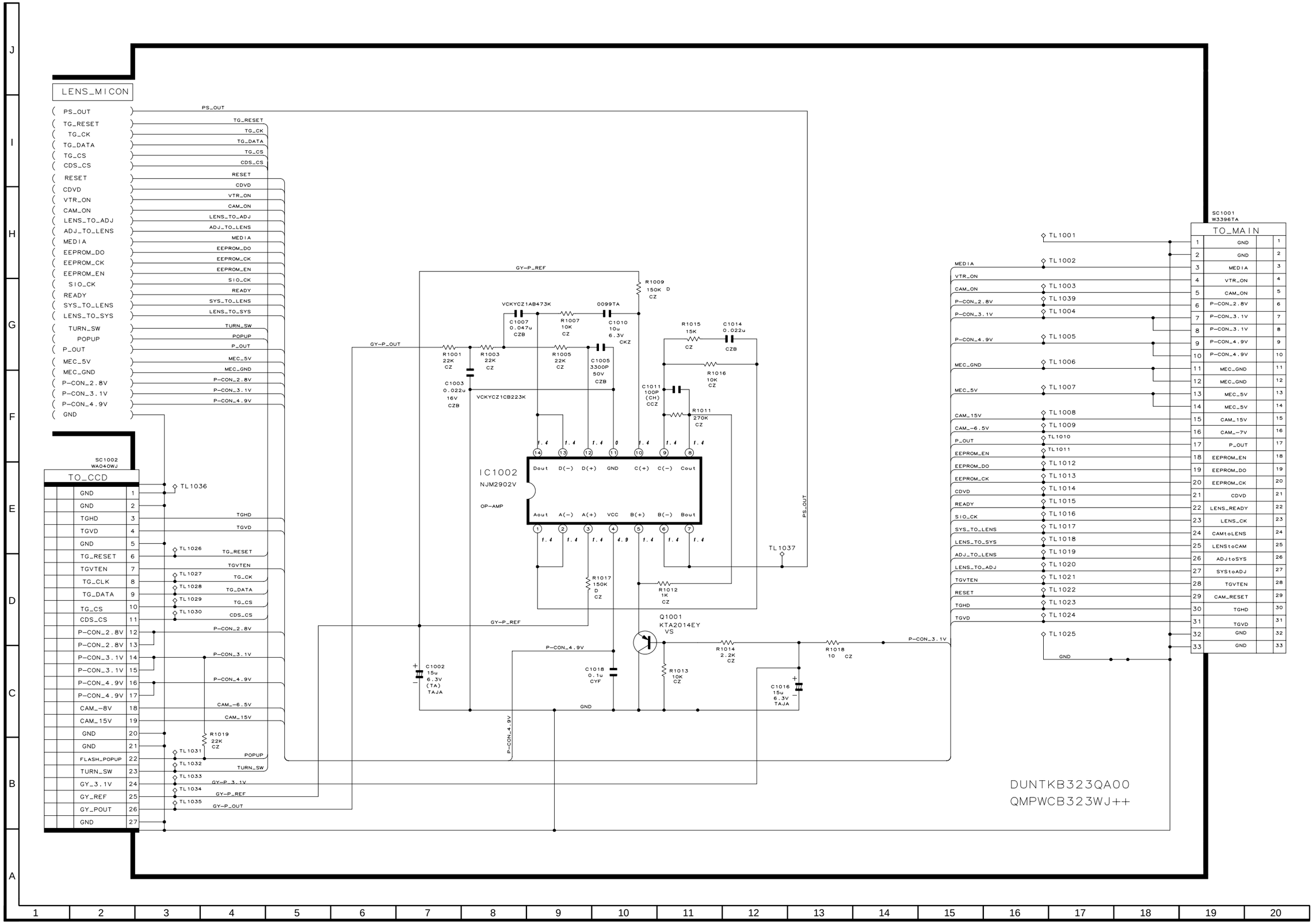
14-18. USB/SD CTL SCHEMATIC DIAGRAM



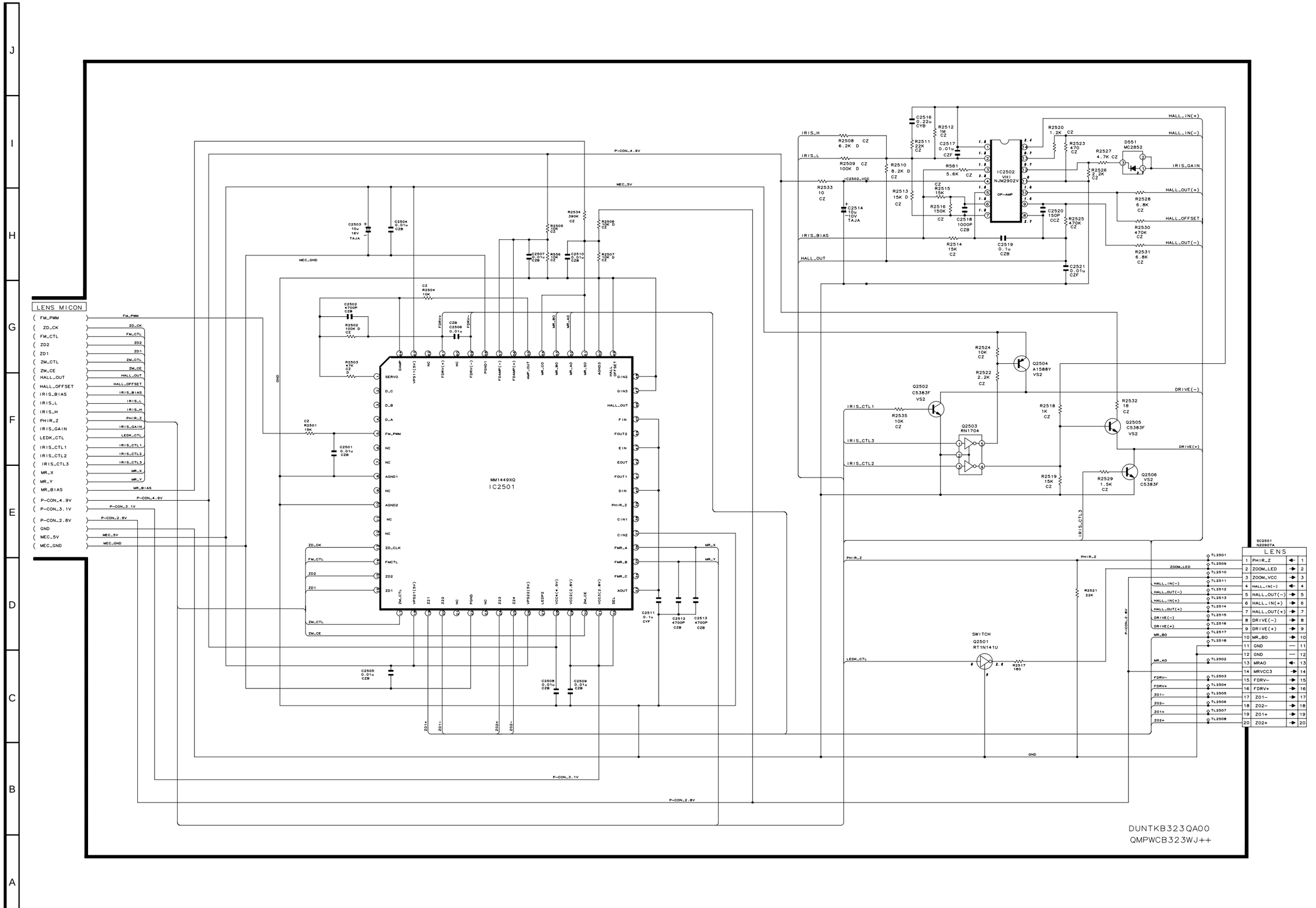
14-19. LENS MiCON SCHEMATIC DIAGRAM



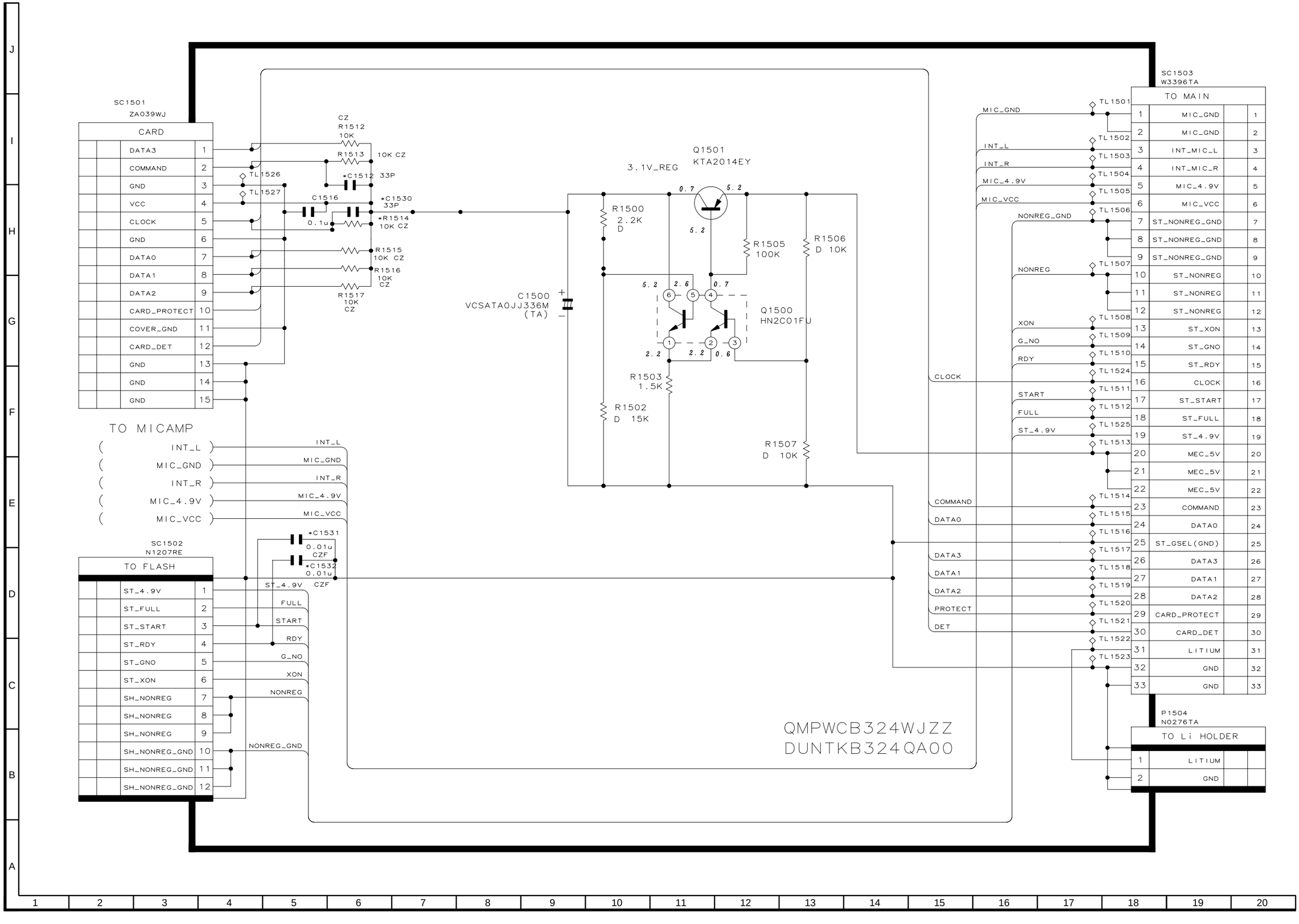
14-20. LENS CONN SCHEMATIC DIAGRAM



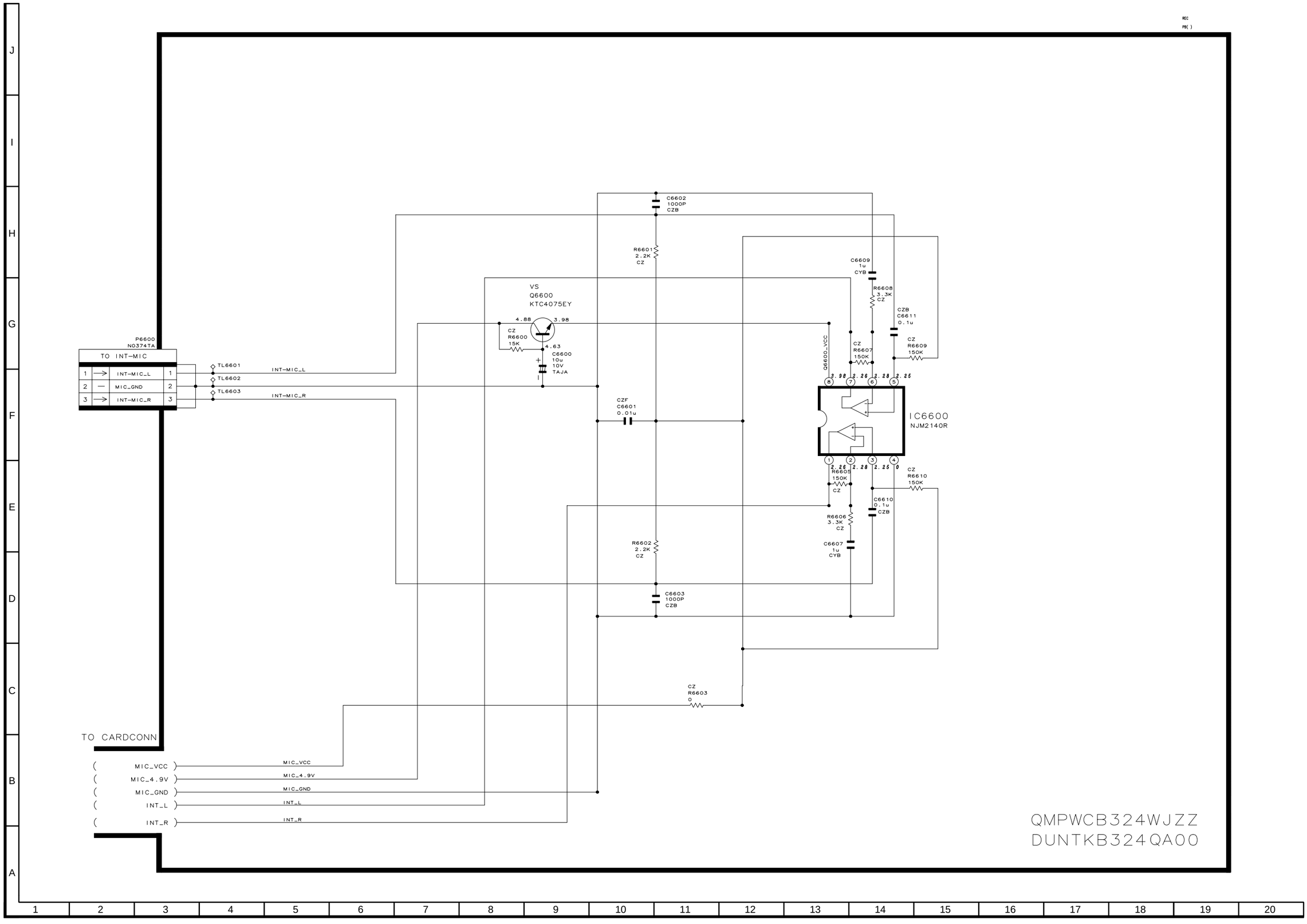
14-21. LENS DRIVE SCHEMATIC DIAGRAM



14-22. CARD CONN SCHEMATIC DIAGRAM

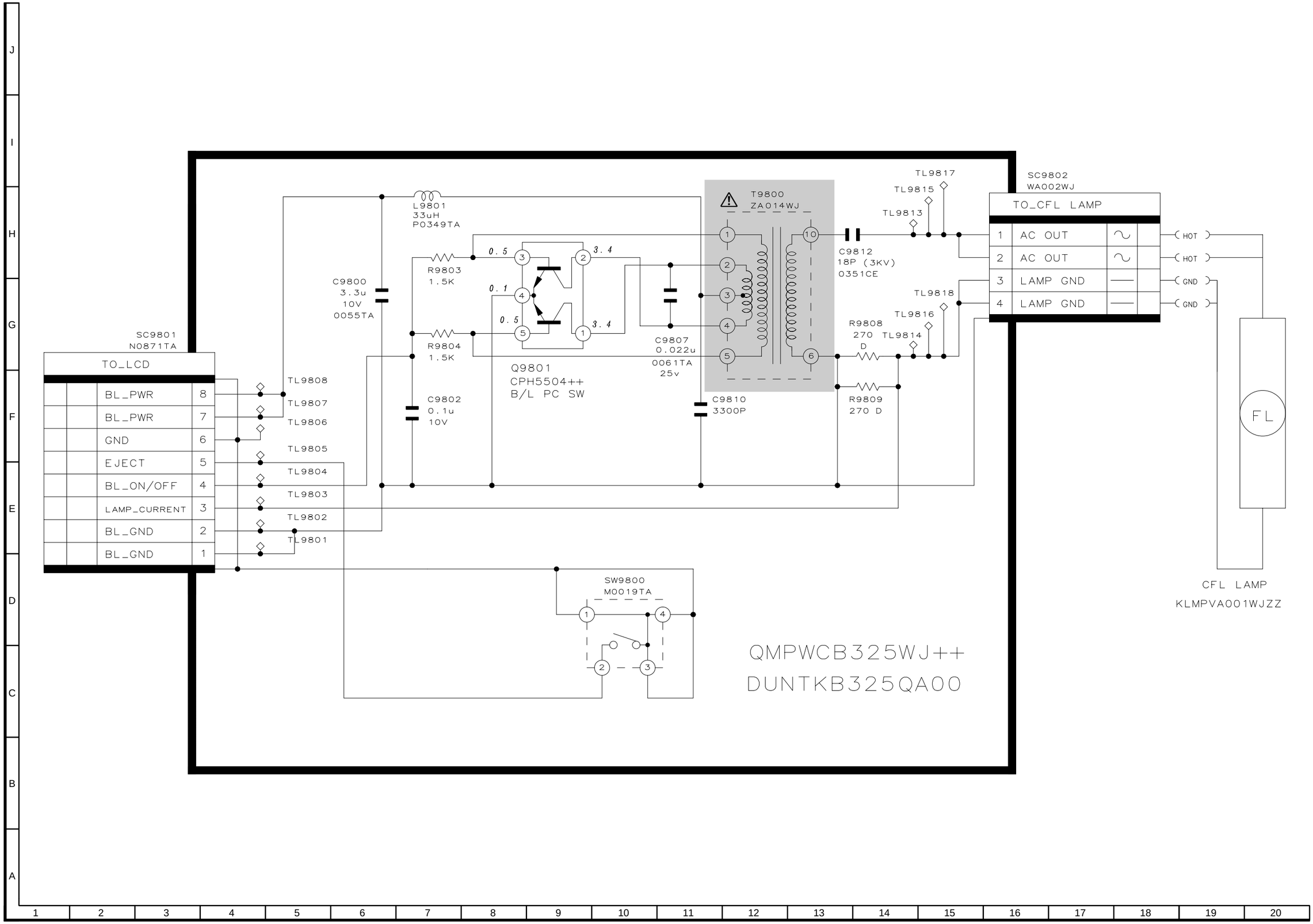


14-23. MICAMP SCHEMATIC DIAGRAM

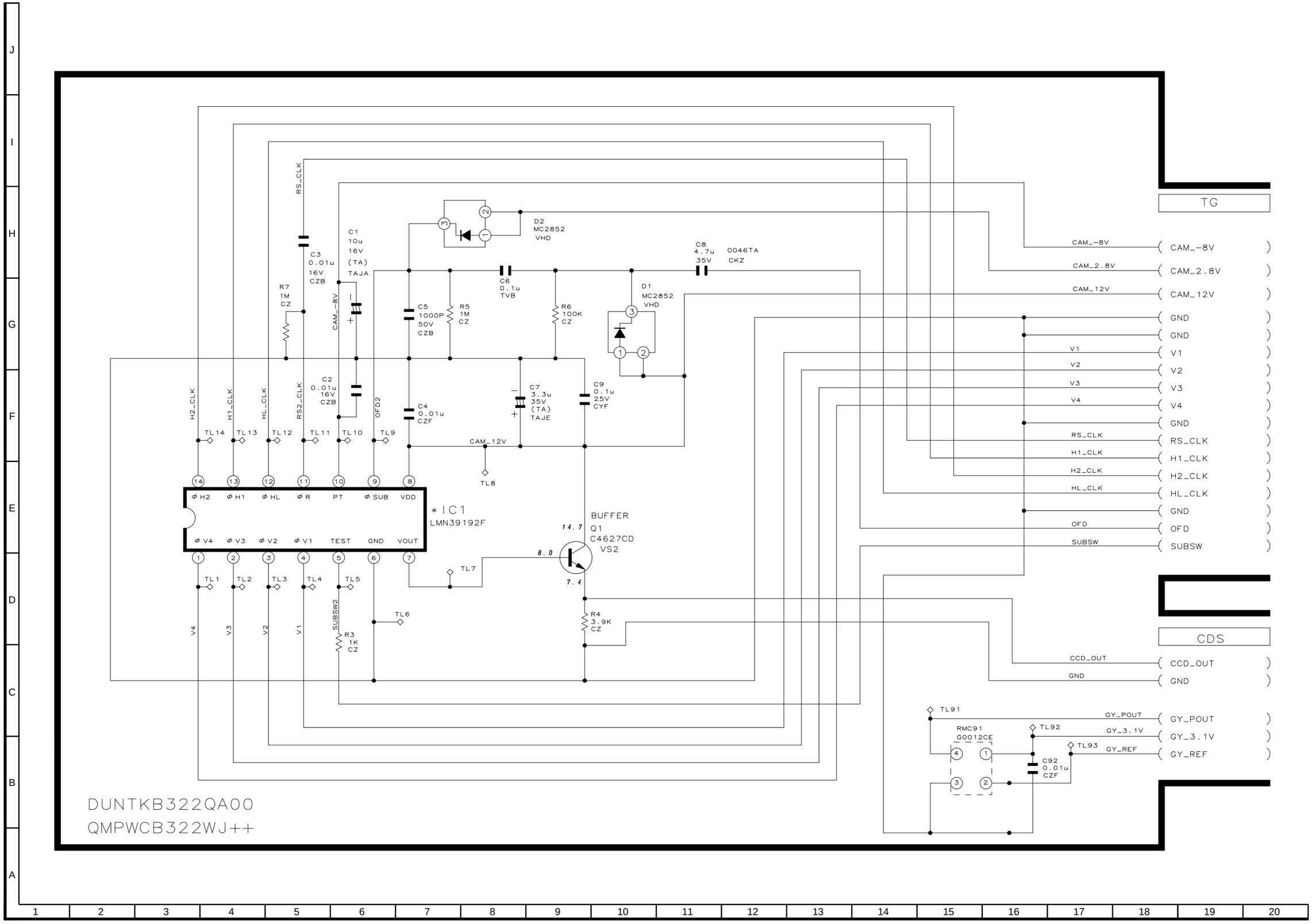


14-24. INVERTER SCHEMATIC DIAGRAM

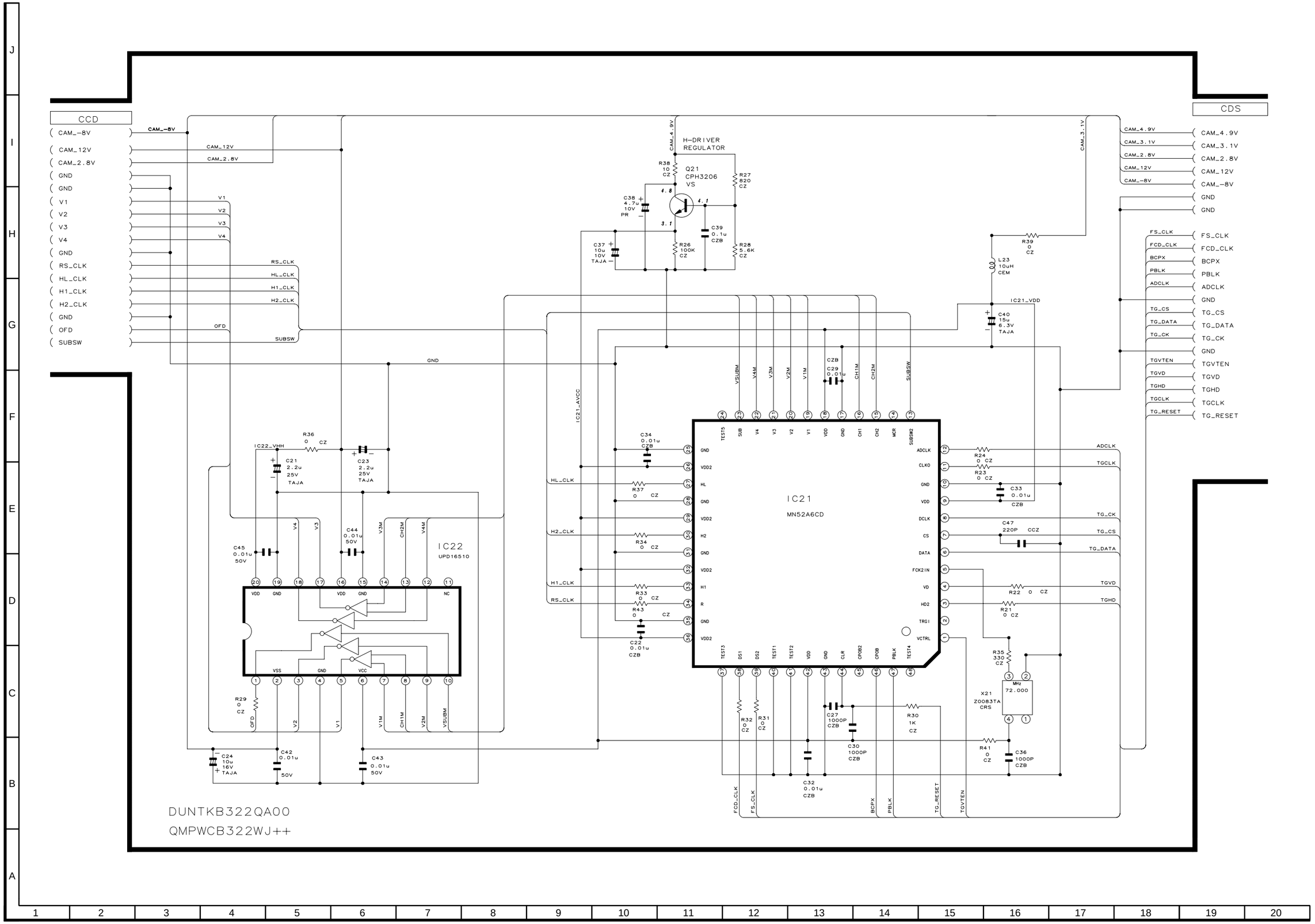
⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS



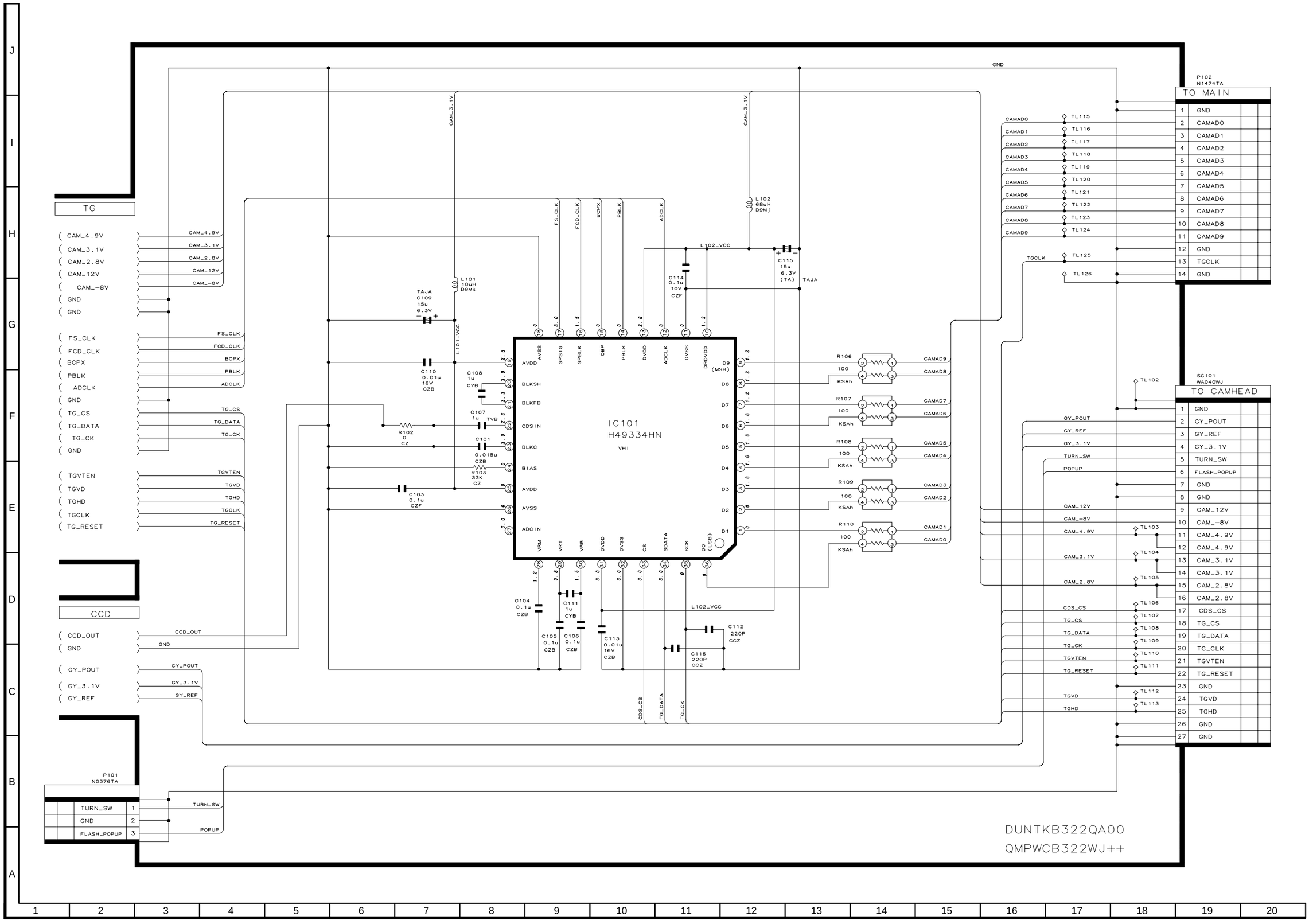
14-25. CCD SCHEMATIC DIAGRAM



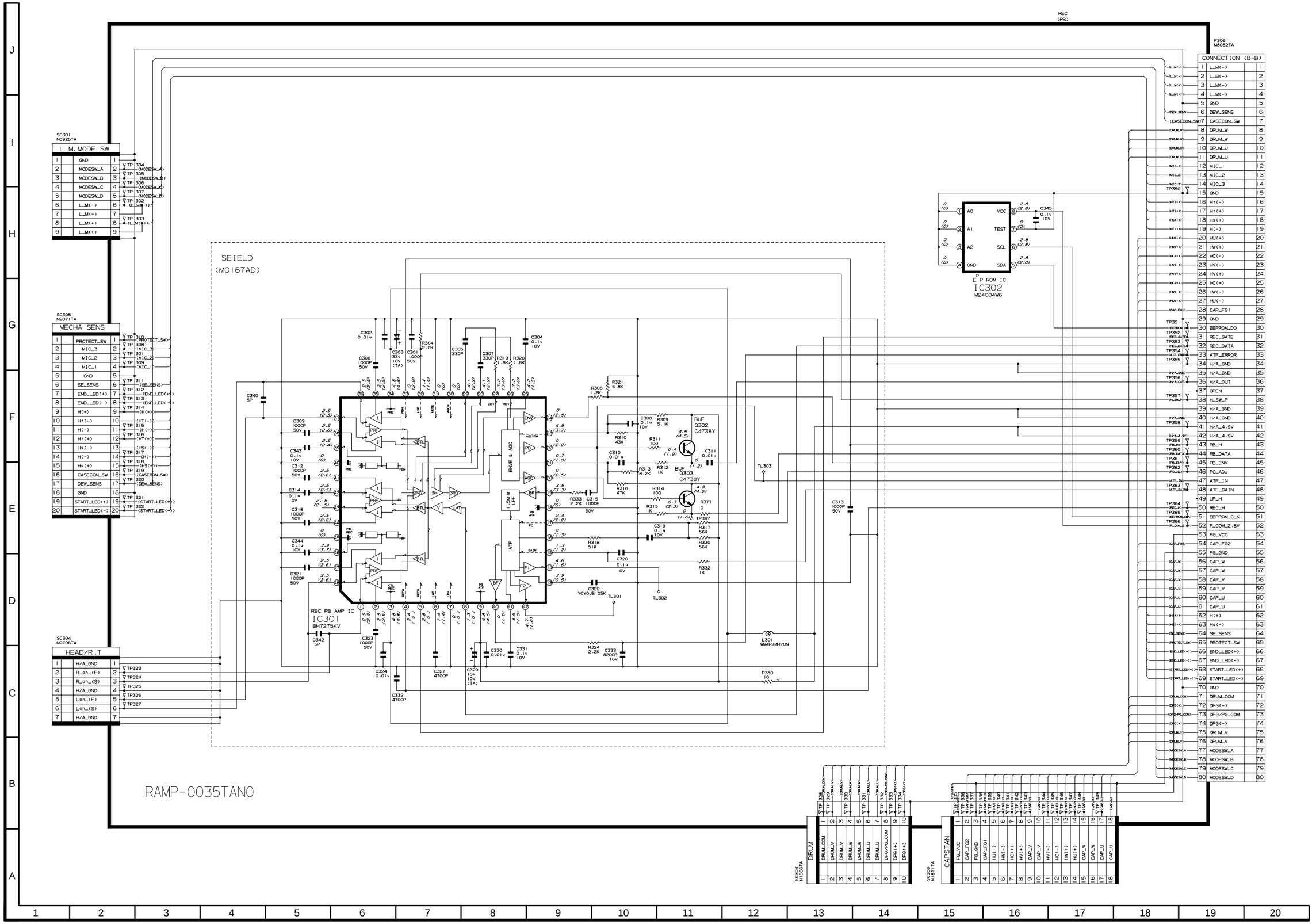
14-26. TG SCHEMATIC DIAGRAM



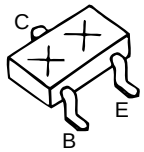
14-27. CDS SCHEMATIC DIAGRAM



14-28. HEAD AMP SCHEMATIC DIAGRAM



15. SEMICONDUCTOR LEAD IDENTIFICATION



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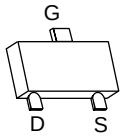

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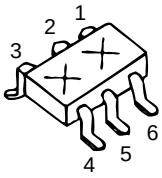

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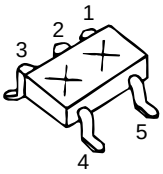

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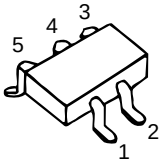

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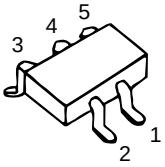

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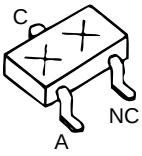

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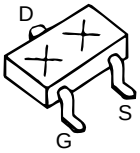

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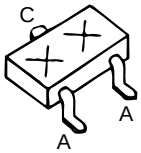

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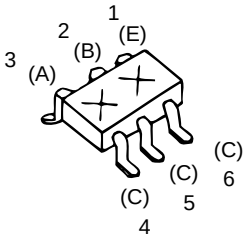

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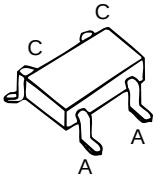

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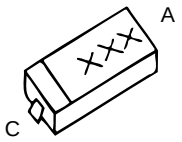

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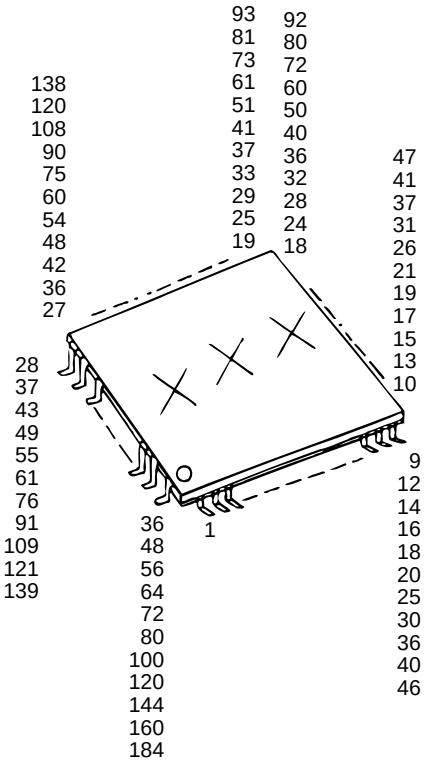

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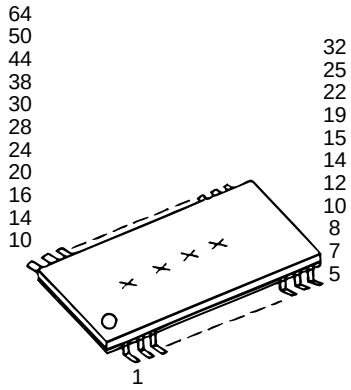

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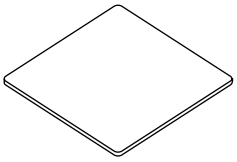

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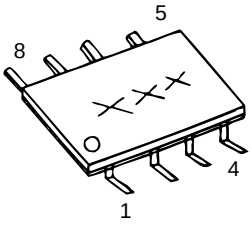

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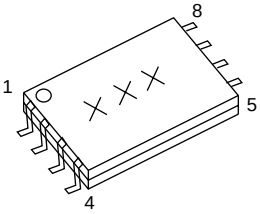

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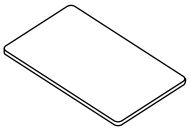

IXA193WJ
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16. PRINTED WIRING BOARD ASSEMBLIES MAIN PWB

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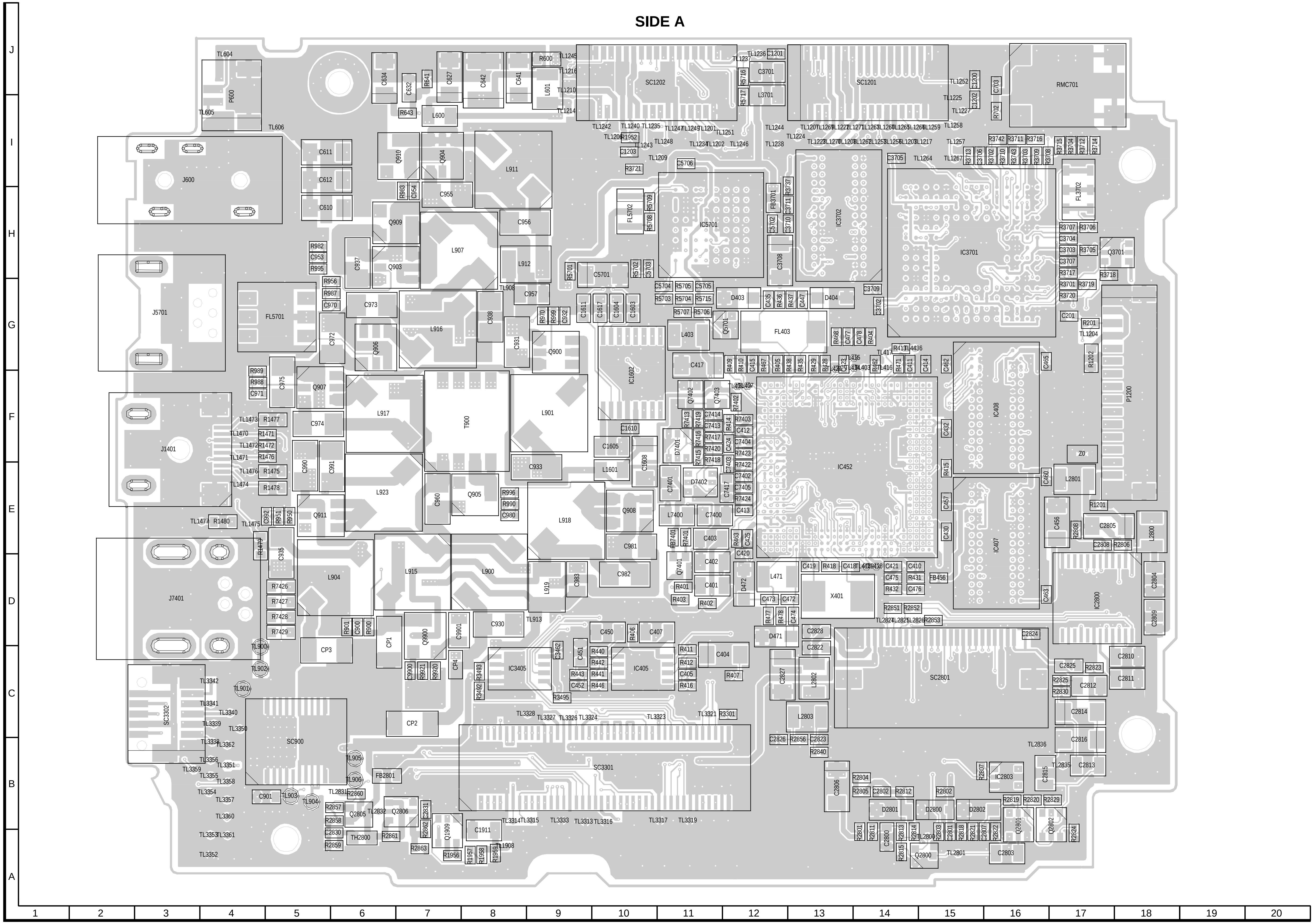
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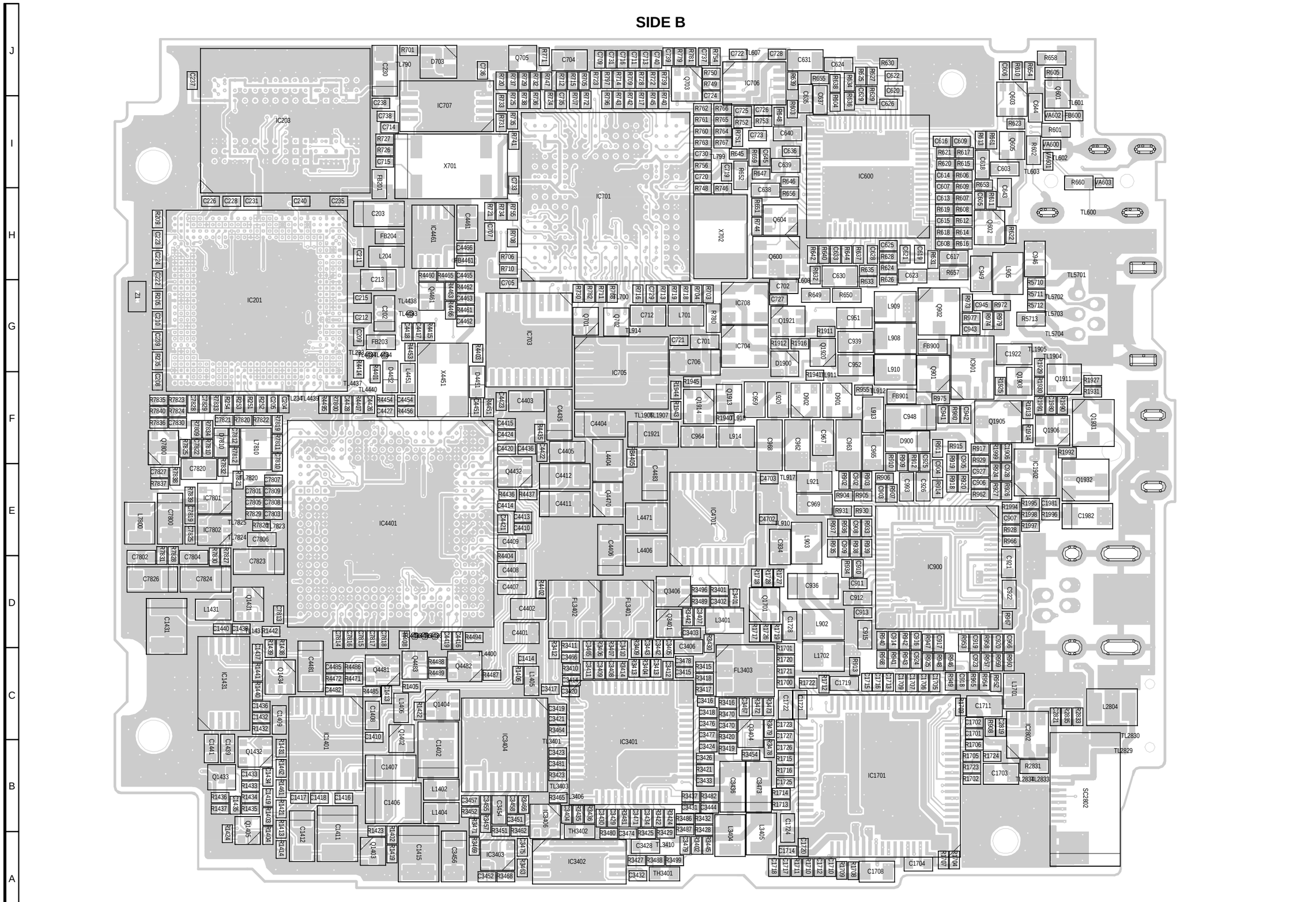
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CAMERA PWB

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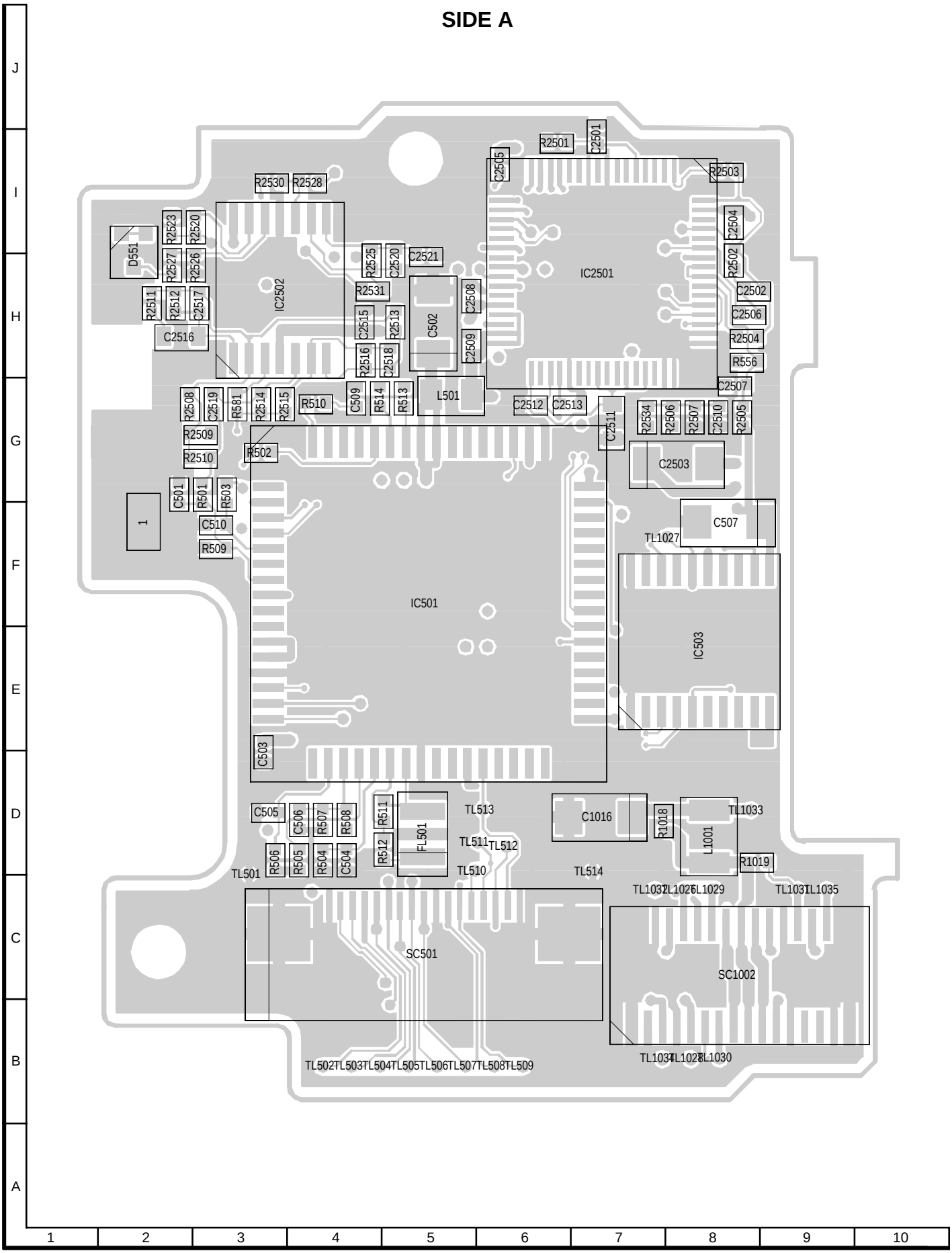

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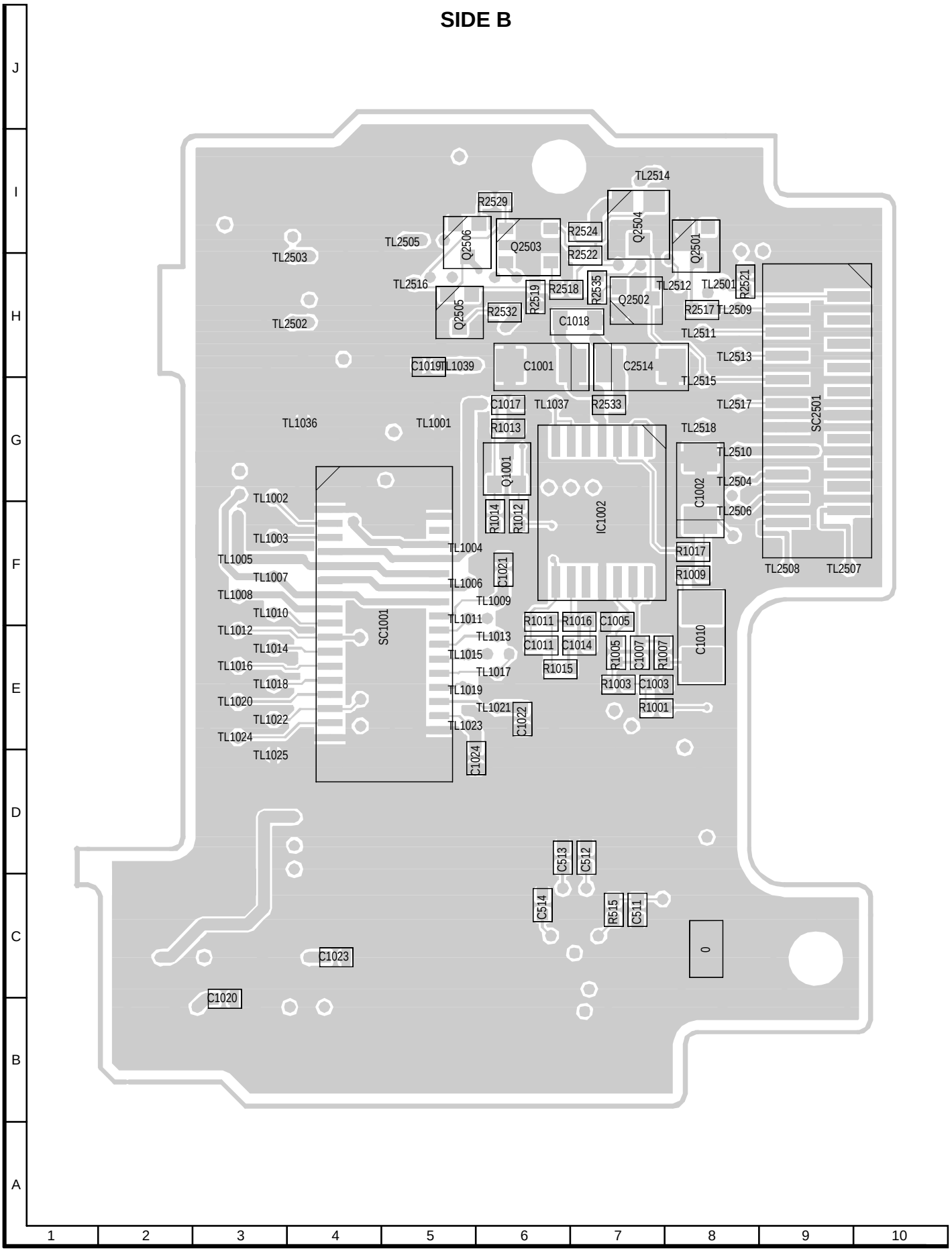
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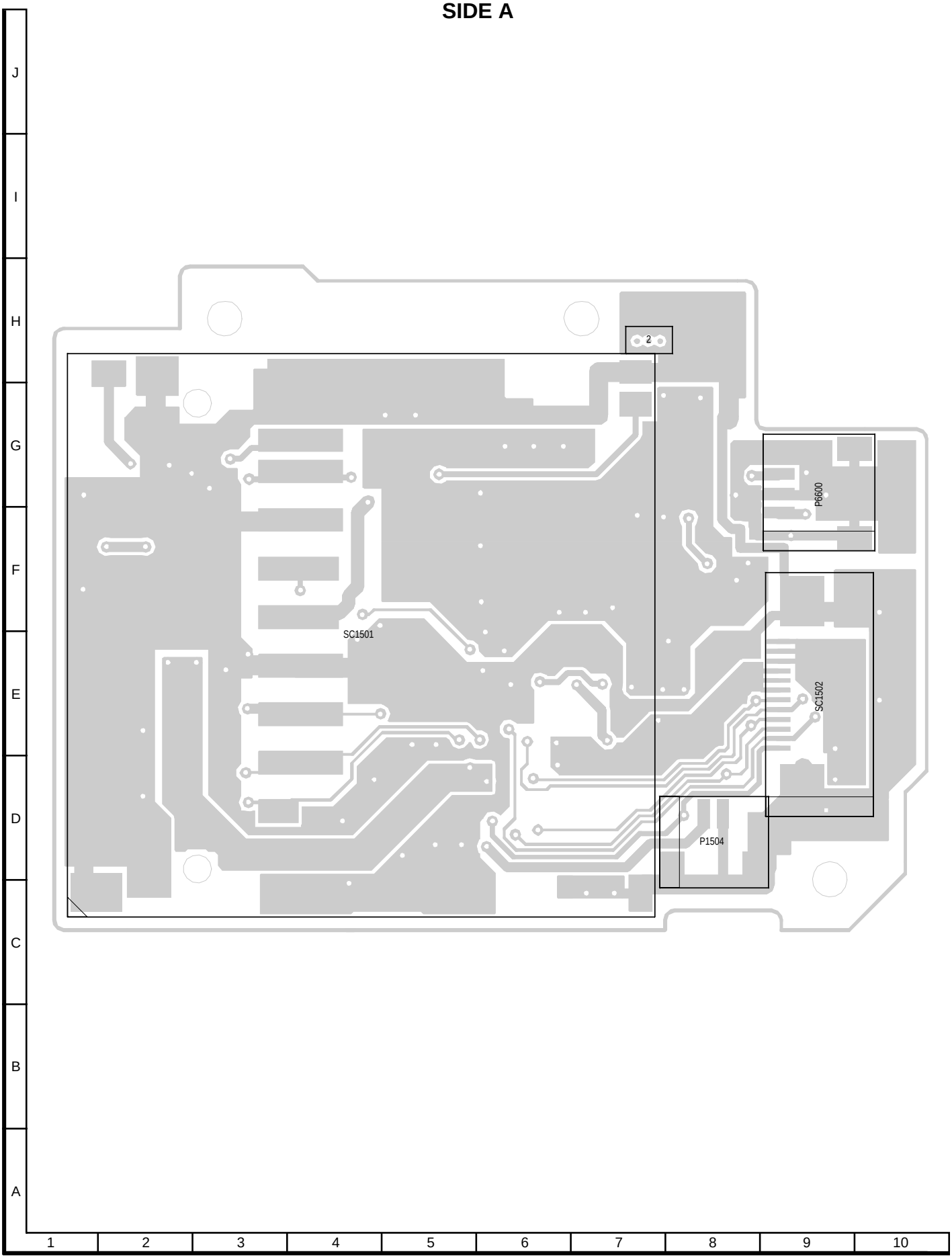
CARD PWB

SIDE A



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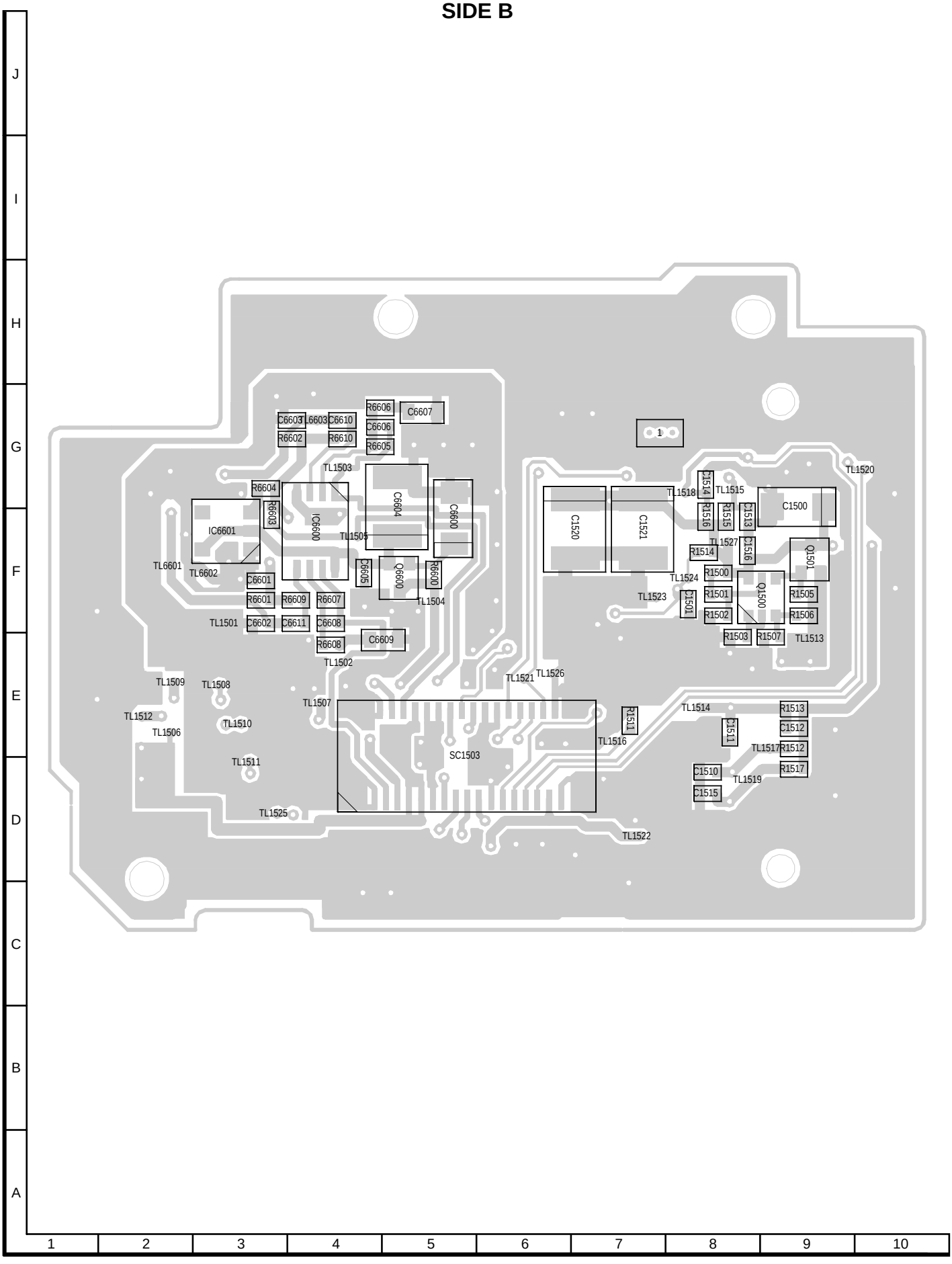
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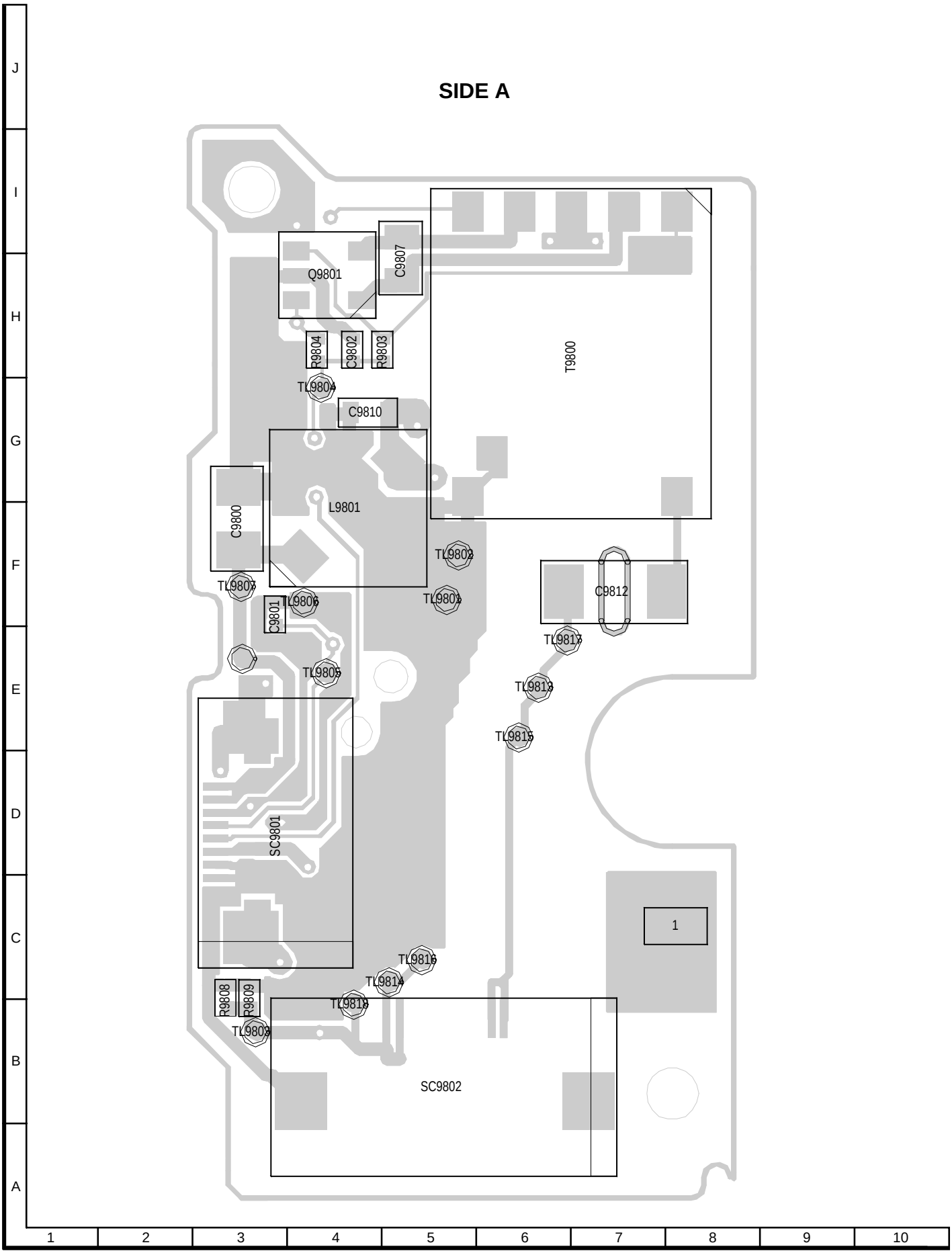
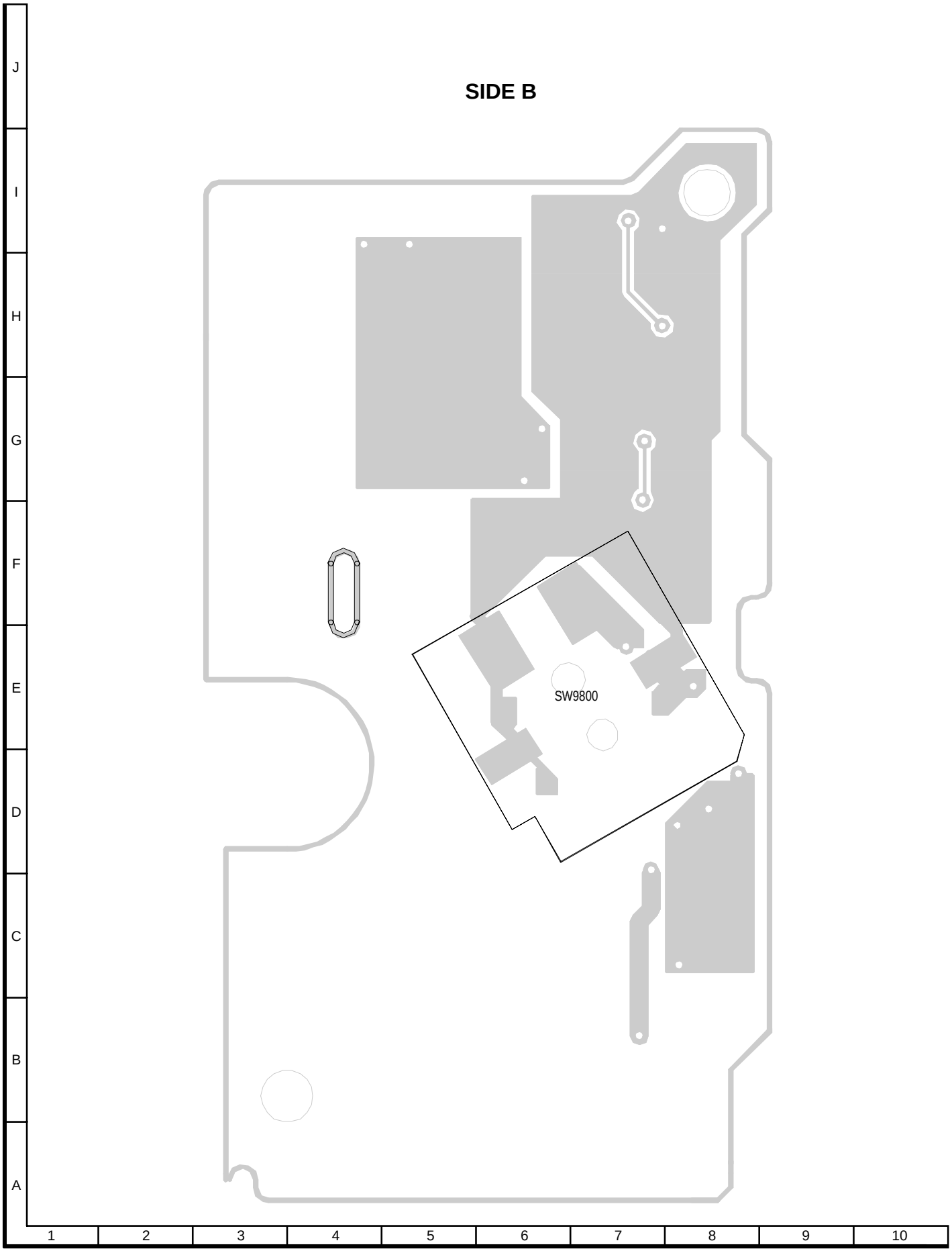
INVERTER PWB

SIDE A

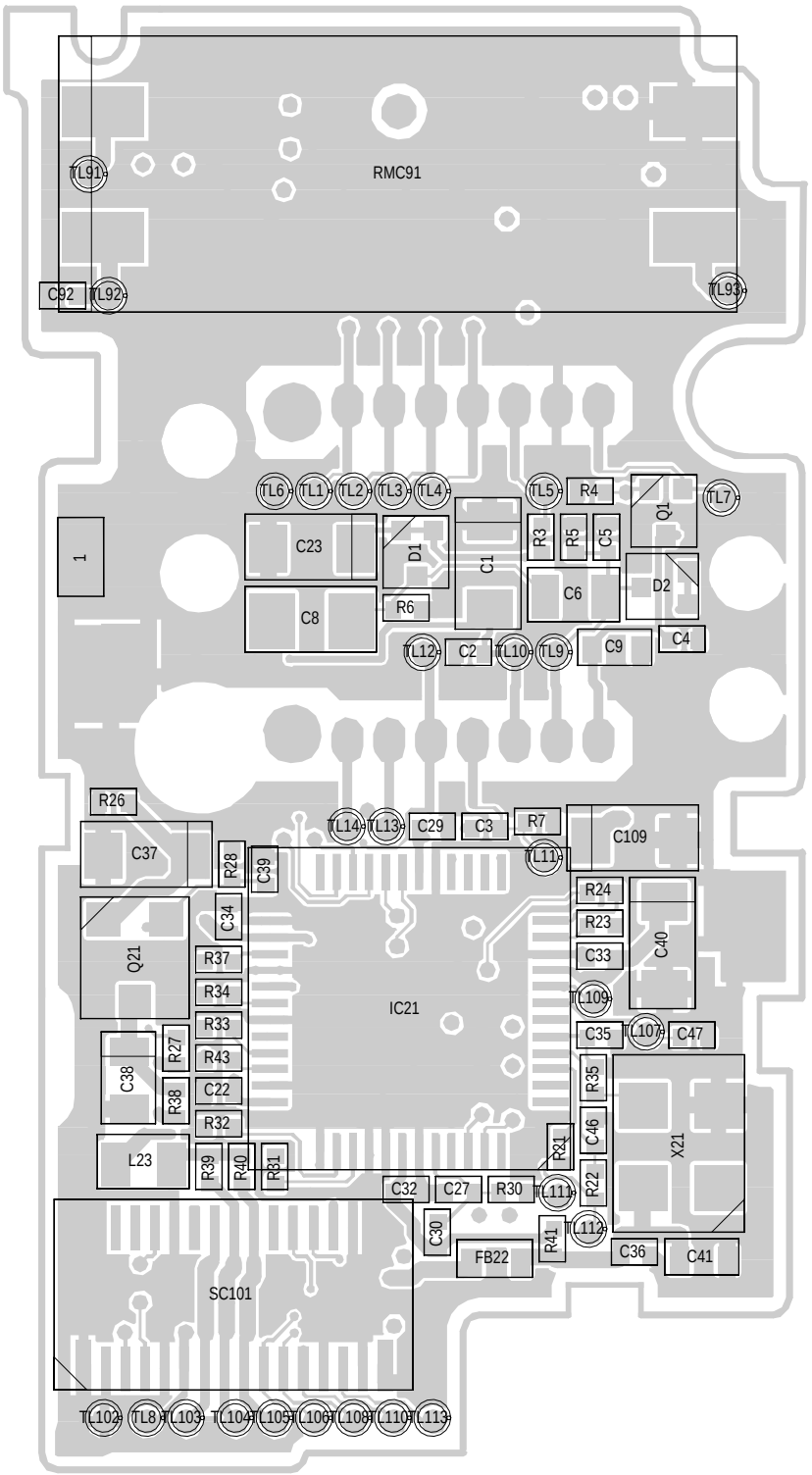


SIDE B

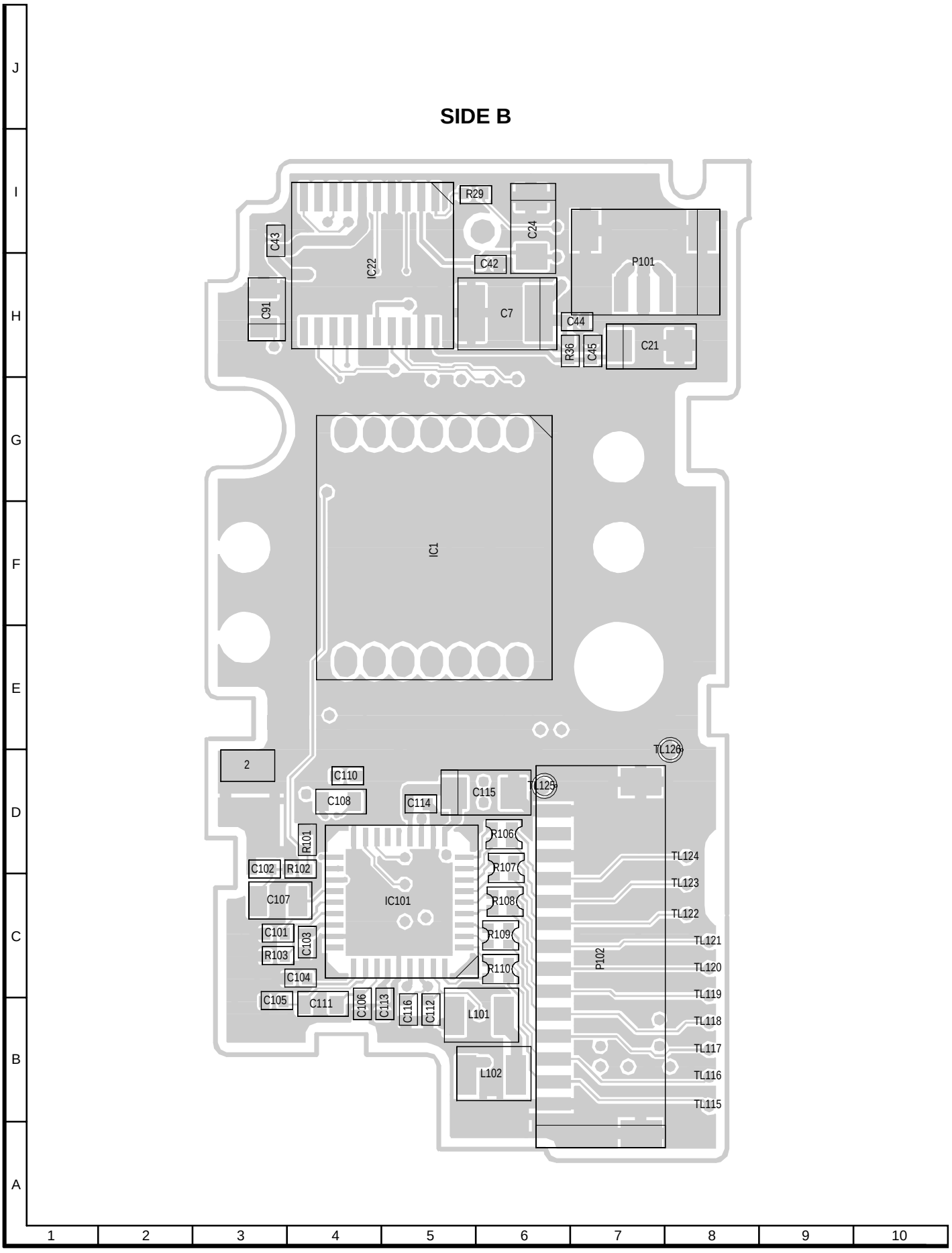


CCD PWB

SIDE A



SIDE B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TL126
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C110
TL125
C108
C115
C114
R106
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R107
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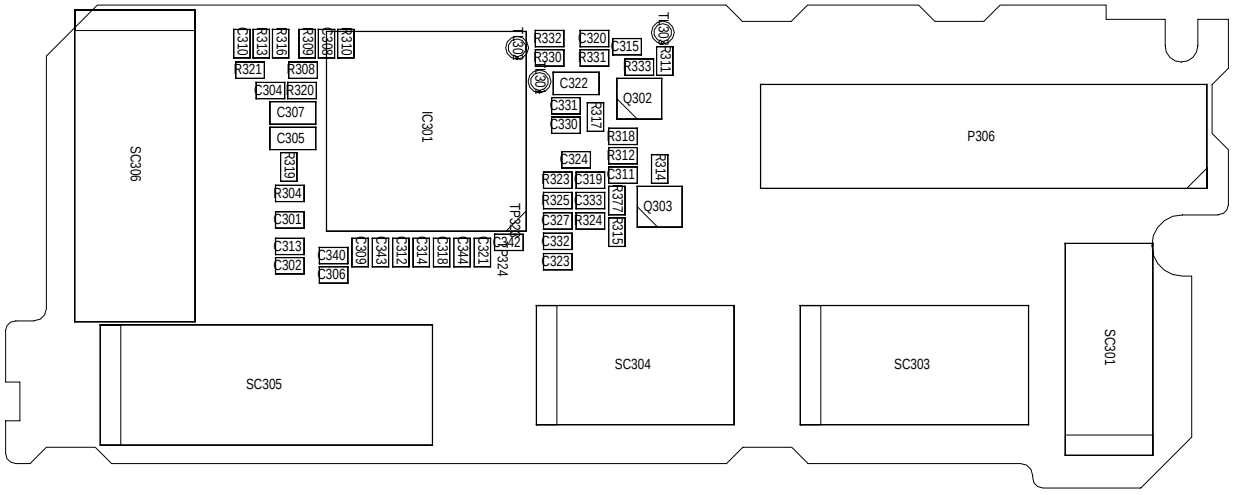
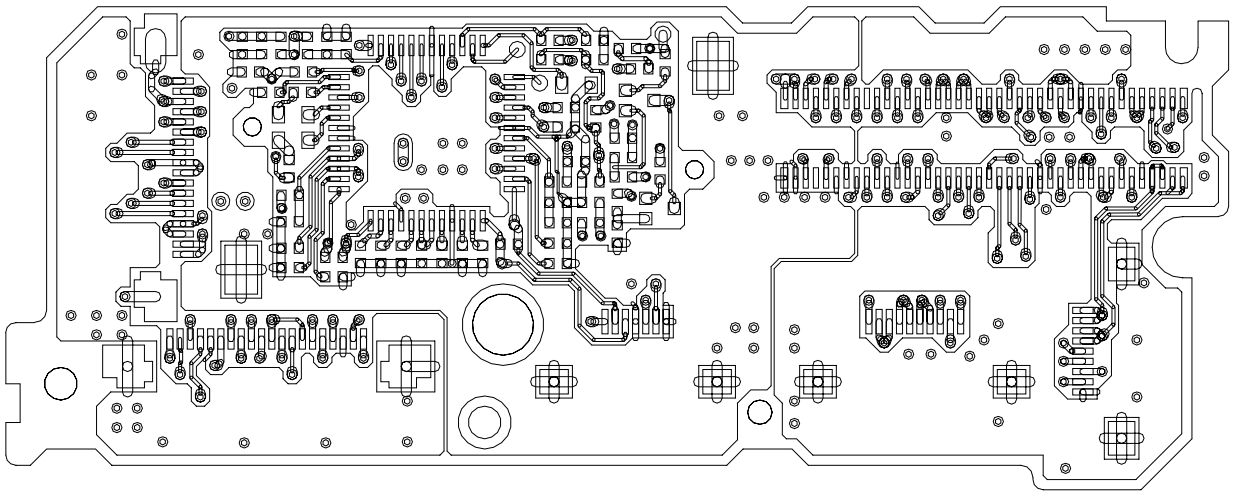
R102
TL124
TL123
C107
IC101
R108
TL122
C101
C103
R109
TL121
R103
P102
R110
TL120
C104
TL119
C105
C111
C106
C113
C116
C112
L101
TL118
TL117
L102
TL116
TL115

HEAD AMP PWB

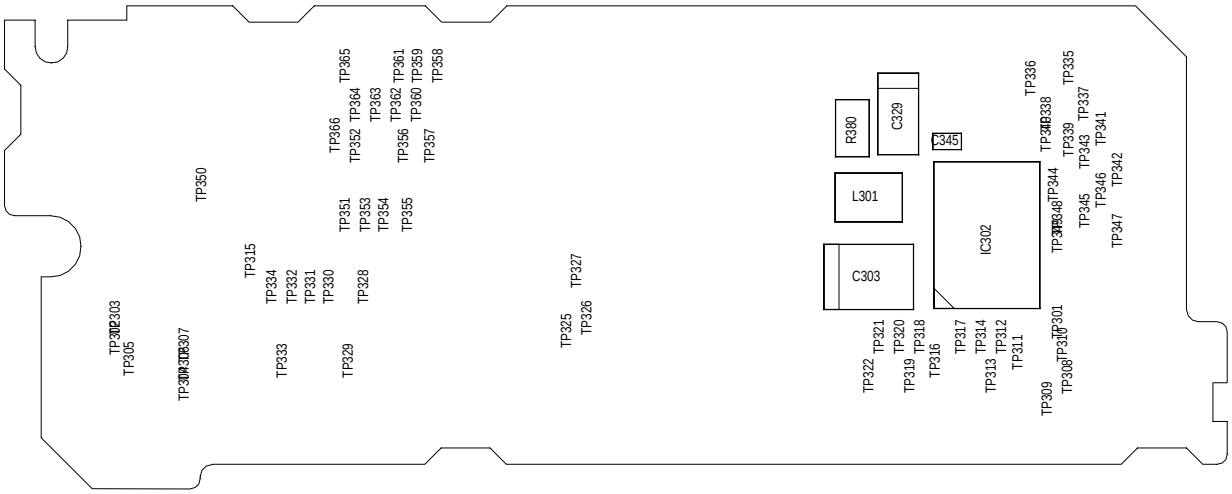
Component Side SIDE A



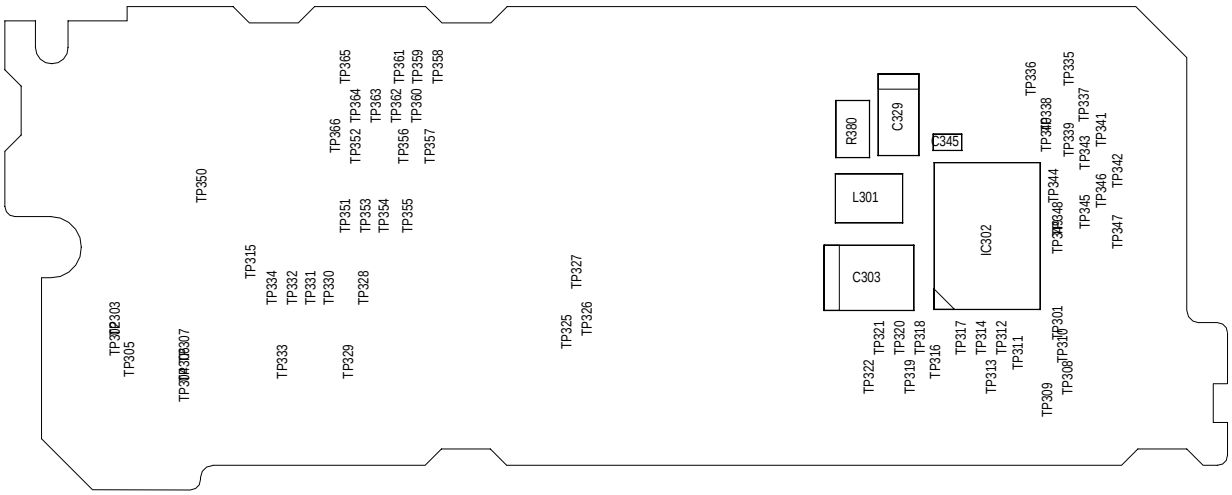
Wiring Side SIDE A



Component Side SIDE B



Wiring Side SIDE B



- M E M O -

17. REPLACEMENT PARTS LIST/ EXPLODED VIEWS

ELECTRICAL PARTS LIST

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Les pièces marquéss "⚠" sont importantes pour maintenir la sècurité de l'appareil. Ne remplacer ces pieces que par des pièces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctinnement de l'appareil.

" HOW TO ORDER REPLACEMENT PARTS "

in USA: Contact your nearest SHARP Parts Distributor. For location of SHARP Parts Distributor,
Call Toll-free 1-IBE800-SHARP

in CANADA: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100.

★MARK : SPARE PARTS-DELIVERY SECTION:ALL JAPAN

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER **2. REF. NO.**
3. PART NO. **4. DESCRIPTION**
5. PRICE CODE

⚠ MARK: SAFETY RELATED PARTS
⚠ PIECES: RELATIVES A LA SECURITE

PWB ASSEMBLY IS NOT REPLACEMENT ITEM
L'ASSEMBLANGE P.C.I. EST UN ARTICLE NON REMPLACABLE

Ref. No.	Part No.	★	Description	Code

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

	DUNTKB321QA01	MAIN PWB Unit (VL-MC500K)	—
	DUNTKB400QA00	MAIN PWB Unit (VL-MC500U)	—
	DUNTKB323QA00	CAMERA PWB Unit	—
	DUNTKB324QA00	CARD PWB Unit	—
	DUNTKB325QA00	INVERTER PWB Unit	—
	DUNTKB322QA00	CCD PWB Unit	—
	RAMP-0035TAN0	HEAD AMP PWB Unit	—

Ref. No.	Part No.	★	Description	Code

DUNTKB321QA01(VL-MC500K)
DUNTKB400QA00(VL-MC500U)
MAIN PWB UNIT

INTEGRATED CIRCUITS

⚠	CP1	VHiCCP2B25/-1Y	CCP2B25, 1.25A 24V	AD
⚠	CP2	VHiCCP2B25/-1Y	CCP2B25, 1.25A 24V	AD
⚠	CP3	VHiCCP2B25/-1Y	CCP2B25, 1.25A 24V	AD
	IC201	RH-iX0785TAZZQ	IX0785TA, CAMENG	BL
	IC203	RH-iXA320WJZZQ	IXA320WJ	BA
	IC405	VHiNJU7015R-1Y	NJU7015R, DC Amp	AF
	IC407	RH-iXA193WJZZY	IXA193WJ, Codec External Memory	AW
	IC408	RH-iXA193WJZZY	IXA193WJ, ECC External Memory	AW
	IC452	RH-iX0809TAZZQ	IX0809TA, Codec/ECC/ PCM/CLK.GEN/DIF	BM
	IC600	VHiLA74206W-1Q	LA74206W	AM
	IC701	RH-iXA352WJPZQ	IXA352WJ, Mec/System Micon	AX
	IC703	RH-iXA353WJPZY	IXA353WJ	AL
	IC704	VHiS817B28C-1Y	S817B28C	AD
	IC705	VHiBR24C64F-1Y	BR24C64F, E^2PROM	AL
	IC706	VHiNJM2143R-1Y	NJM2143R	AE
	IC707	VHiRS5C313/-1Y	RS5C313, Timer	AL
	IC708	VHiS80937AN-1Y	S80937AN, Reset	AD
	IC900	VHiMB3881++-1Y	MB3881++, Power_CTL	AT
	IC901	VHiNJM2143R-1Y	NJM2143R, 2.8V/2.5V Reg	AE
	IC1401	VHiLA73070V-1Y	LA73070V, Video Out	AH
	IC1431	VHiNJM2535V-1Y	NJM2535V, Video In SW	AE
	IC1602	VHiPCM3008+-1Y	PCM3008+, 16Bit ADC/ DAC	AN
	IC1701	VHiLB11990W-1Y	LB11990W, Motor Driver	AR
	IC1902	VHiTA75S01F-1Y	TA75S01F	AD
	IC2800	VHiMM1323XV-1Y	MM1323XV, LCD Interface	AN
	IC2802	VHiTA75S01F-1Y	TA75S01F, I DET	AD
	IC3401	VHiBH7277KV-1Y	BH7277KV, EQ/PLL IC	AX
	IC3402	VHiTLC2940/-1Y	TLC2940, VCO IC	AM
	IC3403	VHiTCSZ04U/-1Y	TCSZ04U, Inv IC	AE
	IC3404	VHiADC08351-1Y	ADC08351, A/D Conv IC	AN
	IC3405	VHiSN2G53CT-1Y	SN2G53CT, SW IC	AE
	IC3701	RH-iXA306WJPZQ	IXA306WJ, Camera/Card Micro Computer	AX
	IC3702	RH-iXA193WJZZY	IXA193WJ, ECC External Memory	AW
	IC4401	RH-iXA204WJZZQ	IXA204WJ, Digiral ADC/DAC Decoder/Encoder	AZ
	IC4461	VHiSN2G53CT-1Y	SN2G53CT, VCTL SW	AE
	IC4701	VHiMB8346BV-1Y	MB8346BV	AN
	IC5701	VHiTE4100HW-1Q	TE4100HW	AY

TRANSISTORS

Q600	VSFMG12////-1Y	FMG12	AD
Q601	VSKRC404E++-1Y	KRC404E++	AB
Q602	VSHN2C01FU/-1Y	HN2C01FU	AC
Q603	VSHN2C01FU/-1Y	HN2C01FU	AC
Q604	VSKRX203U++-1Y	KRX203U++	AB
Q605	VSKTC4075EY-1Y	KTC4075EY	AB
Q701	VSRT1N144U/-1Y	RT1N144U	AB
Q702	VSKTA2014EY-1Y	KTA2014EY	AB
Q705	VSKTA2014EY-1Y	KTA2014EY	AB
Q900	VSCPH6702++-1Y	CPH6702++	AD
Q901	VS2SC4213B/-1Y	2SC4213B	AC
Q902	VSFMMT717//-1Y	FMMT717	AE
Q903	VSCPH6702++-1Y	CPH6702++	AD
Q904	VSCPH6702++-1Y	CPH6702++	AD
Q905	VSFMMT619//-1Y	FMMT619	AE
Q906	VSCPH6702++-1Y	CPH6702++	AD
Q907	VSCPH6702++-1Y	CPH6702++	AD
Q908	VSCPH6702++-1Y	CPH6702++	AD
Q909	VSNDS355AN/-1Y	NDS355AN	AE
Q910	VSNDS355AN/-1Y	NDS355AN	AE
Q911	VSCPH6702++-1Y	CPH6702++	AD
Q1402	VS2SC5376B+-1Y	2SC5376B+	AC

Ref. No.	Part No.	★	Description	Code
Q1403	VS2SC5376B+-1Y		2SC5376B+	AC
Q1404	VSKRX203U++-1Y		KRX203U++	AB
Q1405	VS2SC5376B+-1Y		2SC5376B+	AC
Q1431	VSRN4986///-1Y		RN4986	AB
Q1432	VSKTX101UY+-1Y		KTX101UY+	AB
Q1433	VSKTC4075EY-1Y		KTC4075EY	AB
Q1434	VSHN2A01FU/-1Y		HN2A01FU	AC
Q1701	VSHN2C01FU/-1Y		HN2C01FU	AC
Q1905	VSNDS332P//-1Y		NDS332P	AD
Q1906	VSRN1704///-1Y		RN1704	AC
Q1908	VSKTA2014EY-1Y		KTA2014EY	AB
Q1909	VSKRX203U++-1Y		KRX203U++	AB
Q1911	VS2SC4944Y/-1Y		2SC4944Y	AC
Q1913	VSKTC4075EY-1Y		KTC4075EY	AB
Q1914	VSHN2A01FU/-1Y		HN2A01FU	AC
Q1920	VS3LP01S+++-1Y		3LP01S+++	AC
Q1921	VSKRX203U++-1Y		KRX203U++	AB
Q1931	VSNDS332P//-1Y		NDS332P	AD
Q1932	VSFMMT619//-1Y		FMMT619	AE
Q2800	VS3LN01S///-1Y		3LN01S	AC
Q2801	VSKTX101UY+-1Y		KTX101UY+	AB
Q2802	VSKTX101UY+-1Y		KTX101UY+	AB
Q2805	VSKTC4075EY-1Y		KTC4075EY	AB
Q2806	VSKTX101UY+-1Y		KTX101UY+	AB
Q3401	VS2SC4738Y/-1Y		2SC4738Y	AA
Q3404	VS2SC4738Y/-1Y		2SC4738Y	AA
Q3406	VSXP05534//-1Y		XP05534	AD
Q4432	VSHN2A01FU/-1Y		HN2A01FU	AC
Q4461	VSKRC404E++-1Y		KRC404E++	AB
Q4470	VSRN4986///-1Y		RN4986	AB
Q4481	VSHN1B04FU/-1Y		HN1B04FU	AC
Q4482	VSHN1B04FU/-1Y		HN1B04FU	AC
Q4483	VSKRC404E++-1Y		KRC404E++	AB
Q5701	VSRT1P441U/-1Y		RT1P441U	AB
Q7401	VSKTC4075EY-1Y		KTC4075EY	AB
Q7402	VSKRC404E++-1Y		KRC404E++	AB
Q7403	VSKTC4075EY-1Y		KTC4075EY	AB
Q7800	VS2SC4944Y/-1Y		2SC4944Y	AC
Q9900	VSFMMT619//-1Y		FMMT619	AE
			DIODES	
D403	VHDHVU362//-1Y		HVU362	AE
D404	VHDHVU362//-1Y		HVU362	AE
D471	VHDHVU362//-1Y		HVU362	AE
D472	VHDHVU359TR-1Y		HVU359TR	AE
D703	VHDKDR732++-1Y		KDR732++	AC
D900	RH-EX1394CEZZY		Zener Diode, EX1394CE	AB
D901	VHDMA4S159/-1Y		MA4S159	AC
D902	VHDMA4S159/-1Y		MA4S159	AC
D1900	VHDMA132WK/-1Y		MA132WK	AA
D4451	VHDKV1812K/-1Y		KV1812K	AD
D4452	VHDKV1812K/-1Y		KV1812K	AD
D7810	VHDHVC202A+-1Y		HVC202A+	AB
VA600	RH-VXA003WJZZY		Varistor	AC
VA602	RH-VXA003WJZZY		Varistor	AC
VA603	RH-VXA003WJZZY		Varistor	AC
			PACKAGED CIRCUITS	
TH2800	VHHT1103K44-1Y		Thermistor	AD
TH3401	VHHT1682J44-1Y		Thermistor	AC
X401	RCRSC0160TAZZY		Crystal, CRSC0160TA	AH
X701	RCRSC0032TAZZY		Crystal, CRSC0032TA	AG
X702	RCRSC0183TAZZY		Crystal, CRSC0183TA	AH
X4451	RCRSC0167TAZZY		Crystal, CRSC0167TA	AM
			COILS AND TRANSFORMER	
FL403	RFiLC0164TAZZY		Filter, FiLC0164TA	AG
FL3401	RCiLF0408TAZZY		Coil, CiLF0408TA	AG
FL3402	RCiLF0408TAZZY		Coil, CiLF0408TA	AG
FL3403	RCiLF0409TAZZY		Coil, CiLF0409TA	AG
FL3702	RFiLZ0003TAZZY		Filter, FiLZ0003TA	AD
FL5701	RCiLF0416TAZZY		Coil, CiLF0416TA	AE
FL5702	RFiLZA004WJPZY		Filter, FiLZA004WJ	AD
L204	VPCEM470M3R7NY		Peaking, 47µH	AC
L403	VPD9M1R0MR20NY		Peaking, 1µH	AB

Ref. No.	Part No.	★	Description	Code
L471	VPD9M100J1R7NY		Peaking, 10µH	AC
L600	VPCEM470M3R7NY		Peaking, 47µH	AC
L601	VPBWM100KR50NY		Peaking, 10µH	AC
L701	VPCEM100MR70NY		Peaking, 10µH	AC
L900	RCiLP0323TAZZY		Coil, 4.7µH	AD
L901	RCiLPA010WJZZY		Coil, 15µH	AD
L902	VPD9M2R2MR32NY		Peaking, 2.2µH	AB
L903	VPD9M2R2MR32NY		Peaking, 2.2µH	AB
L904	RCiLP0323TAZZY		Coil, 4.7µH	AD
L905	VPD9M4R7MR53NY		Peaking, 4.7µH	AB
L907	RCiLPA010WJZZY		Coil, 15µH	AD
L908	VPD9M2R2MR32NY		Peaking, 2.2µH	AB
L909	VPD9M4R7MR53NY		Peaking, 4.7µH	AB
L910	VPD9M2R2MR32NY		Peaking, 2.2µH	AB
L911	RCiLPA010WJZZY		Coil, 15µH	AD
L912	VPCCM2R2MR09NY		Peaking, 2.2µH	AC
L913	VPCEM100MR70NY		Peaking, 10µH	AC
L914	VPCEM100MR70NY		Peaking, 10µH	AC
L915	RCiLP0323TAZZY		Coil, 4.7µH	AD
L916	RCiLPA012WJZZY		Coil, 33µH	AD
L917	RCiLPA012WJZZY		Coil, 33µH	AD
L918	RCiLPA010WJZZY		Coil, 15µH	AD
L919	VPCCM2R2MR09NY		Peaking, 2.2µH	AC
L920	VPCEM100MR70NY		Peaking, 10µH	AC
L921	VPCEM100MR70NY		Peaking, 10µH	AC
L923	RCiLPA010WJZZY		Coil, 15µH	AD
L1402	VPCEM470M3R7NY		Peaking, 47µH	AC
L1404	VPCEM470M3R7NY		Peaking, 47µH	AC
L1431	VPCEM470M3R7NY		Peaking, 47µH	AC
L1601	VPCEM100MR70NY		Peaking, 10µH	AC
L1701	VPCEM100MR70NY		Peaking, 10µH	AC
L1702	VPD9M4R7MR53NY		Peaking, 4.7µH	AB
L2800	VPD9M470K4R1NY		Peaking, 47µH	AC
L2801	VPD9M470K4R1NY		Peaking, 47µH	AC
L2802	VPD9M470J6R6NY		Peaking, 47µH	AC
L2804	VPCQM4R7MR22NY		Peaking, 4.7µH	AB
L3401	RCiLP0276TAZZY		Coil, CiLP0276TA	AC
L3404	VPD9M4R7MR53NY		Peaking, 4.7µH	AB
L3405	VPD9M4R7MR53NY		Peaking, 4.7µH	AB
L3701	VPCEM4R7MR40NY		Peaking, 4.7µH	AC
L4404	VPD9M100KR86NY		Peaking, 10µH	AC
L4406	VPD9M100KR86NY		Peaking, 10µH	AC
L4451	RCiLP0353TAZZY		Coil, CiLP0353TA	AC
L4471	VPD9M470K4R1NY		Peaking, 47µH	AC
L7400	VPCEM100MR70NY		Peaking, 10µH	AC
L7800	VPD9M100KR86NY		Peaking, 10µH	AC
L7810	VPD9M180J2R4NY		Peaking, 18µH	AC
⚠ T900	RTRNZ0152TAZZY		Power Transformer	AF
			CAPACITORS	
C202	VCSAPR0JJ106MY		10 6.3V Tantalum	AD
C203	VCSATA0JJ156MY		15 6.3V Tantalum	AC
C204	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C205	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C208	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C209	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C210	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C211	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C212	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C213	VCSAPR0JJ106MY		10 6.3V Tantalum	AD
C215	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C222	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C223	VCCCCZ1HH221JY		220p 50V Ceramic	AB
C224	VCCCCZ1HH221JY		220p 50V Ceramic	AB
C226	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C228	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C230	VCSATA0JJ156MY		15 6.3V Tantalum	AC
C231	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C235	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C237	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C238	VCKYCZ1AF104ZY		0.1 10V Ceramic	AB
C239	VCCCCZ1HH220JY		22p 50V Ceramic	AB
C240	VCCCCZ1HH6R0DY		6p 50V Ceramic	AA
C401	RC-KZ0083TAZZY		2.2 10V Ceramic	AC
C402	RC-KZ0083TAZZY		2.2 10V Ceramic	AC

Ref. No.	Part No.	★		Description	Code
C403	RC-KZ0083TAZZY	2.2	10V	Ceramic	AC
C404	VCSATA1AJ475MY	4.7	10V	Tantalum	AC
C405	VCKYCZ1AB473KY	0.047	10V	Ceramic	AB
C407	RC-KZ0083TAZZY	2.2	10V	Ceramic	AC
C410	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C411	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C412	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C413	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C414	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C415	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C417	VCSATA0JJ336MY	33	6.3V	Tantalum	AD
C418	VCCCCZ1HH100DY	10p	50V	Ceramic	AB
C419	VCCCCZ1HH100DY	10p	50V	Ceramic	AB
C420	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C421	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C423	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C424	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C425	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C430	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C432	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C435	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C447	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C450	RC-KZ0117TAZZY	4.7	6.3V	Ceramic	AD
C451	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C452	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C456	VCSATA0JJ106MY	10	6.3V	Tantalum	AD
C457	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C460	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C462	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C463	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C465	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C472	VCCCCZ1HH1R0CY	1p	50V	Ceramic	AB
C473	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C474	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C475	VCKYCZ1HB221KY	220p	50V	Ceramic	AA
C476	VCKYCZ1HB221KY	220p	50V	Ceramic	AA
C477	VCKYCZ1HB221KY	220p	50V	Ceramic	AA
C478	VCKYCZ1HB221KY	220p	50V	Ceramic	AA
C603	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C605	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C606	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C607	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C608	VCKYCZ1HB392KY	3900p	50V	Ceramic	AA
C609	VCKYCZ1HB392KY	3900p	50V	Ceramic	AA
C610	VCSATA0JJ106MY	10	6.3V	Tantalum	AD
C611	VCSATA0JJ106MY	10	6.3V	Tantalum	AD
C612	VCSATA0JJ336MY	33	6.3V	Tantalum	AD
C613	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C614	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C615	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C616	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C617	VCKYCY1CB333KY	0.033	16V	Ceramic	AA
C618	VCKYCY1CB333KY	0.033	16V	Ceramic	AA
C619	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C620	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C621	VCKYCZ1AB273KY	0.027	10V	Ceramic	AB
C622	VCKYCZ1AB273KY	0.027	10V	Ceramic	AB
C623	VCKYCY1AB474KY	0.47	10V	Ceramic	AC
C624	VCKYCY1AB474KY	0.47	10V	Ceramic	AC
C627	VCSATA0JJ336MY	33	6.3V	Tantalum	AD
C628	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C629	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C630	RC-KZ0083TAZZY	2.2	10V	Ceramic	AC
C631	RC-KZ0083TAZZY	2.2	10V	Ceramic	AC
C632	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C635	VCKYCY1AB224KY	0.22	10V	Ceramic	AB
C636	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C637	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C638	VCKYCY1AB224KY	0.22	10V	Ceramic	AB
C641	VCSATA0JJ336MY	33	6.3V	Tantalum	AD
C642	VCSATE1AJ476MY	47	10V	Tantalum	AD
C643	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C644	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C645	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C701	VCKYCY1AF105ZY	1	10V	Ceramic	AC

Ref. No.	Part No.	★		Description	Code
C702	VCKYCY0JF105ZY	1	6.3V	Ceramic	AB
C703	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C704	VCKYTV1AB105KY	1	10V	Ceramic	AC
C705	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C706	VCSATA0JJ106MY	10	6.3V	Tantalum	AD
C712	VCKYTV1AB105KY	1	10V	Ceramic	AC
C713	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C714	VCCCCZ1HH120JY	12p	50V	Ceramic	AB
C715	VCCCCZ1HH120JY	12p	50V	Ceramic	AB
C716	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C719	VCCCCZ1HH220JY	22p	50V	Ceramic	AB
C720	VCCCCZ1HH220JY	22p	50V	Ceramic	AB
C721	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C722	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C723	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C724	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C725	VCKYCZ1EB682KY	6800p	25V	Ceramic	AB
C726	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C727	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C728	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C729	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C730	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C731	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C733	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C735	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C736	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C737	VCKYCZ1EB682KY	6800p	25V	Ceramic	AB
C738	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C739	VCKYCZ1EB682KY	6800p	25V	Ceramic	AB
C740	VCKYCZ1EB682KY	6800p	25V	Ceramic	AB
C900	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C901	VCKYCY1CB104KY	0.1	16V	Ceramic	AB
C904	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C905	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C906	VCKYCZ1EB472KY	4700p	25V	Ceramic	AB
C907	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C908	VCKYCZ1AB473KY	0.047	10V	Ceramic	AB
C910	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C911	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C912	VCKYCY1CB104KY	0.1	16V	Ceramic	AB
C913	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C914	VCCCCZ1HH101JY	100p	50V	Ceramic	AB
C915	VCKYCY1AB224KY	0.22	10V	Ceramic	AB
C916	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C917	VCKYCZ1HB221KY	220p	50V	Ceramic	AA
C918	VCKYCZ1HB221KY	220p	50V	Ceramic	AA
C919	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C920	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C921	VCKYCY1CB104KY	0.1	16V	Ceramic	AB
C922	VCKYCY1CB104KY	0.1	16V	Ceramic	AB
C923	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C924	VCKYCZ1HB471KY	470p	50V	Ceramic	AB
C926	VCKYCY1EB223KY	0.022	25V	Ceramic	AA
C927	VCKYCZ1HB471KY	470p	50V	Ceramic	AB
C928	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C930	RC-KZ0070TAZZY	4.7	16V	Ceramic	AD
C931	RC-KZ0075TAZZY	2.2	16V	Ceramic	AC
C932	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C933	RC-KZ0044TAZZY	4.7	10V	Ceramic	AD
C934	RC-KZ0071TAZZY	2.2	6.3V	Ceramic	AD
C935	RC-KZ0070TAZZY	4.7	16V	Ceramic	AD
C936	VCSATA1AJ106MY	10	10V	Tantalum	AC
C937	RC-KZ0070TAZZY	4.7	16V	Ceramic	AD
C938	RC-KZ0074TAZZY	10	6.3V	Ceramic	AF
C939	VCKYTV1AB105KY	1	10V	Ceramic	AC
C941	VCKYCZ1CB103KS	0.01	16V	Ceramic	AB
C943	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C946	VCKYTV1AB105KY	1	10V	Ceramic	AC
C948	VCSATA0JJ106MY	10	6.3V	Tantalum	AD
C949	VCKYTV1AB105KY	1	10V	Ceramic	AC
C951	VCKYTV1AB105KY	1	10V	Ceramic	AC
C952	RC-KZ0071TAZZY	2.2	6.3V	Ceramic	AD
C953	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C954	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C955	RC-KZ0075TAZZY	2.2	16V	Ceramic	AC

Ref. No.	Part No.	★	Description			Code
C956	RC-KZ0044TAZZY		4.7	10V	Ceramic	AD
C957	VCKYTV1AB105KY		1	10V	Ceramic	AC
C959	VCKYTV1EB104KY		0.1	25V	Ceramic	AB
C960	RC-KZ0070TAZZY		4.7	16V	Ceramic	AD
C962	RC-KZ0072TAZZY		1	25V	Ceramic	AC
C963	RC-KZ0072TAZZY		1	25V	Ceramic	AC
C964	VCKYTV1CF105ZY		1	16V	Ceramic	AB
C965	VCKYTV1EB104KY		0.1	25V	Ceramic	AB
C966	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C967	VCKYTV1AB105KY		1	10V	Ceramic	AC
C968	RC-KZ0072TAZZY		1	25V	Ceramic	AC
C969	VCKYTV1CF105ZY		1	16V	Ceramic	AB
C970	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C971	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C972	RC-KZ0070TAZZY		4.7	16V	Ceramic	AD
C973	RC-KZ0070TAZZY		4.7	16V	Ceramic	AD
C974	RC-KZ0070TAZZY		4.7	16V	Ceramic	AD
C980	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C981	RC-KZ0075TAZZY		2.2	16V	Ceramic	AC
C982	RC-KZ0044TAZZY		4.7	10V	Ceramic	AD
C983	VCKYTV1AB105KY		1	10V	Ceramic	AC
C990	RC-KZ0075TAZZY		2.2	16V	Ceramic	AC
C991	RC-KZ0044TAZZY		4.7	10V	Ceramic	AD
C992	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C993	VCKYCY1AB224KY		0.22	10V	Ceramic	AB
C1200	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C1201	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C1202	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C1402	VCSATE1AJ226MY		22	10V	Tantalum	AD
C1406	VCSATE0JJ107MY		100	6.3V	Tantalum	AE
C1407	VCSATA0JJ106MY		10	6.3V	Tantalum	AD
C1408	VCKYCY0JF105ZY		1	6.3V	Ceramic	AB
C1409	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C1410	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1411	VCSATE0JJ107MY		100	6.3V	Tantalum	AE
C1412	VCSATA0JJ106MY		10	6.3V	Tantalum	AD
C1415	VCSATE1AJ226MY		22	10V	Tantalum	AD
C1416	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C1417	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1418	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C1419	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1431	VCSATE1AJ226MY		22	10V	Tantalum	AD
C1432	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C1433	VCCCCZ1HH150JY		15p	50V	Ceramic	AB
C1434	VCCCCZ1HH680JY		68p	50V	Ceramic	AB
C1435	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C1436	VCCCCZ1HH150JY		15p	50V	Ceramic	AB
C1437	VCCCCZ1HH680JY		68p	50V	Ceramic	AB
C1438	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1439	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C1440	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C1441	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C1603	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C1604	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C1605	RC-KZ0083TAZZY		2.2	10V	Ceramic	AC
C1608	VCSATA0JJ106MY		10	6.3V	Tantalum	AD
C1610	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1611	VCKYCY1AB474KY		0.47	10V	Ceramic	AC
C1617	VCKYCY1AB474KY		0.47	10V	Ceramic	AC
C1701	VCKYCZ1CB223KY		0.022	16V	Ceramic	AC
C1702	VCKYCZ1CB223KY		0.022	16V	Ceramic	AC
C1703	VCKYTV1AB105KY		1	10V	Ceramic	AC
C1704	VCKYCY1AF105ZY		1	10V	Ceramic	AC
C1705	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C1706	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1707	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1708	RC-KZ0083TAZZY		2.2	10V	Ceramic	AC
C1709	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1710	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1711	VCKYTV1AB105KY		1	10V	Ceramic	AC
C1712	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1713	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C1714	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1715	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C1716	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C1717	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1718	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1719	VCKYCY0JF105ZY		1	6.3V	Ceramic	AB
C1720	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1721	VCKYCY0JF105ZY		1	6.3V	Ceramic	AB
C1722	VCKYCY1CB473KY		0.047	16V	Ceramic	AA
C1723	VCKYCZ1EB472KY		4700p	25V	Ceramic	AB
C1724	VCKYCY1AF105ZY		1	10V	Ceramic	AC
C1725	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1726	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C1727	VCCCCZ1HH101JY		100p	50V	Ceramic	AB
C1728	VCKYCY1AF105ZY		1	10V	Ceramic	AC
C1906	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C1911	VCKYTV1EB104KY		0.1	25V	Ceramic	AB
C1921	VCSATA1DJ475MY		4.7	20V	Tantalum	AC
C1922	VCKYTV1EB104KY		0.1	25V	Ceramic	AB
C1980	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C1981	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C1982	VCSATA1AJ106MY		10	10V	Tantalum	AC
C2800	VCKYCY0JF105ZY		1	6.3V	Ceramic	AB
C2801	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C2802	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C2803	VCKYTV1EB104KY		0.1	25V	Ceramic	AB
C2804	VCKYTV1AB105KY		1	10V	Ceramic	AC
C2805	VCSATA1AJ106MY		10	10V	Tantalum	AC
C2806	VCSATA1VJ155MY		1.5	35V	Tantalum	AC
C2807	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C2808	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C2809	VCKYTV1AB105KY		1	10V	Ceramic	AC
C2810	VCKYTV1AB105KY		1	10V	Ceramic	AC
C2811	VCKYTV1AB105KY		1	10V	Ceramic	AC
C2812	VCKYTV1AB105KY		1	10V	Ceramic	AC
C2813	VCKYTV1CB105KY		1	16V	Ceramic	AC
C2815	VCKYTV1CB105KY		1	16V	Ceramic	AC
C2819	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C2821	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C2822	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C2823	VCCCCZ1HH330JY		33p	50V	Ceramic	AB
C2825	VCKYCY1EB104KY		0.1	25V	Ceramic	AB
C2828	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C2830	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C2831	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C3401	VCCCCZ1HH390JY		39p	50V	Ceramic	AB
C3402	VCCCCZ1HH100DY		10p	50V	Ceramic	AB
C3403	VCCCCZ1HH100DY		10p	50V	Ceramic	AB
C3405	VCCCCZ1HH820JY		82p	50V	Ceramic	AB
C3406	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C3408	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3409	VCKYCZ1HB471KY		470p	50V	Ceramic	AB
C3410	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3411	VCKYCZ1HB471KY		470p	50V	Ceramic	AB
C3412	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3413	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3414	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3415	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3416	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3417	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3418	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3419	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3420	VCCCCZ1HH100DY		10p	50V	Ceramic	AB
C3421	VCCCCZ1HH121JY		120p	50V	Ceramic	AB
C3423	VCCCCZ1HH121JY		120p	50V	Ceramic	AB
C3424	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C3426	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C3428	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C3429	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C3430	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3431	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C3432	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C3433	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C3434	VCKYCZ1CB103KS		0.01	16V	Ceramic	AB
C3436	VCSATA0YJ336MY		33	7V	Tantalum	AD
C3442	VCCCCZ1HH180JY		18p	50V	Ceramic	AB
C3443	VCCCCZ1HH220JY		22p	50V	Ceramic	AB
C3444	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB

Ref. No.	Part No.	★		Description		Code
C3452	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3454	VCKYCY0JB105KY	1	6.3V	Ceramic		AC
C3455	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3456	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C3457	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3458	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3462	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3467	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3471	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3473	VCSATA0JJ336MY	33	6.3V	Tantalum		AD
C3474	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3475	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3476	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3477	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3479	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3481	VCCCCZ1HH100DY	10p	50V	Ceramic		AB
C3701	VCKYTV1AB105KY	1	10V	Ceramic		AC
C3702	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3703	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3704	VCKYCZ1HB102KY	1000p	50V	Ceramic		AB
C3705	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3706	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C3708	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C3709	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3710	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C3711	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C4401	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C4402	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C4403	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C4404	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C4405	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C4406	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C4407	VCKYCY1AB224KY	0.22	10V	Ceramic		AB
C4408	VCKYCY1AB224KY	0.22	10V	Ceramic		AB
C4409	VCKYCY1AB224KY	0.22	10V	Ceramic		AB
C4410	VCKYCZ1AB104KY	0.1	10V	Ceramic		AB
C4411	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C4412	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C4413	VCKYCZ1AB104KY	0.1	10V	Ceramic		AB
C4414	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C4415	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C4416	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4417	VCCCCZ1HH221JY	220p	50V	Ceramic		AB
C4418	VCCCCZ1HH221JY	220p	50V	Ceramic		AB
C4419	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4420	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4421	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4422	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4423	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4424	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4426	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4427	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4428	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4435	VCSATA1AJ106MY	10	10V	Tantalum		AC
C4436	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4451	VCCCCZ1HH390JY	39p	50V	Ceramic		AB
C4454	VCCCCZ1HH390JY	39p	50V	Ceramic		AB
C4461	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C4462	VCKYCZ1AB104KY	0.1	10V	Ceramic		AB
C4463	VCKYCZ1EB682KY	6800p	25V	Ceramic		AB
C4466	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4481	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C4482	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C4483	VCSATA1AJ475MY	4.7	10V	Tantalum		AC
C4485	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C4702	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C4703	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C5701	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C5702	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C5703	VCKYCZ1HB102KY	1000p	50V	Ceramic		AB
C5704	VCKYCZ1HB102KY	1000p	50V	Ceramic		AB
C5705	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C5706	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7400	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C7401	RC-KZ0083TAZZY	2.2	10V	Ceramic		AC
C7402	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7403	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7404	VCKYCZ1EB472KY	4700p	25V	Ceramic		AB
C7413	VCKYCZ1HB221KY	220p	50V	Ceramic		AA
C7414	VCCCCZ1HH330JY	33p	50V	Ceramic		AB
C7417	VCKYCY0JB105KY	1	6.3V	Ceramic		AC
C7800	VCSATA0JJ106MY	10	6.3V	Tantalum		AD
C7801	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C7802	VCKYCY0JB105KY	1	6.3V	Ceramic		AC
C7803	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C7804	VCKYCY0JB105KY	1	6.3V	Ceramic		AC
C7805	VCKYCZ1AF104ZY	0.1	10V	Ceramic		AB
C7806	VCKYCY0JB105KY	1	6.3V	Ceramic		AC
C7807	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7808	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7809	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7810	VCCCCZ1HH470JY	47p	50V	Ceramic		AB
C7812	VCKYCZ1HB102KY	1000p	50V	Ceramic		AB
C7813	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7814	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7815	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7816	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7817	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7818	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7827	VCKYCZ1HB102KY	1000p	50V	Ceramic		AB
C7828	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C7829	VCCCCZ1HH101JY	100p	50V	Ceramic		AB
C7830	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C9900	VCKYCZ1CB103KS	0.01	16V	Ceramic		AB
C9901	VCKYTV1AB105KY	1	10V	Ceramic		AC

RESISTORS

CP4	VRS-CY1JF000JY	0 (MC500K)	1/16W	Metal Oxide	AA
R201	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R205	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R209	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R235	VRS-CZ1JF333JY	33k	1/16W	Metal Oxide	AA
R251	VRS-CZ1JF104JY	100k	1/16W	Metal Oxide	AA
R252	VRS-CZ1JF104JY	100k	1/16W	Metal Oxide	AA
R253	VRS-CZ1JF104JY	100k	1/16W	Metal Oxide	AA
R254	VRS-CZ1JF104JY	100k	1/16W	Metal Oxide	AA
R401	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R402	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R403	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R404	VRS-CZ1JF102JY	1k	1/16W	Metal Oxide	AA
R405	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R406	VRS-CZ1JF101JY	100	1/16W	Metal Oxide	AA
R407	VRS-CZ1JF153JY	15k	1/16W	Metal Oxide	AA
R409	VRS-CZ1JF103JY	10k	1/16W	Metal Oxide	AA
R410	VRS-CZ1JF103JY	10k	1/16W	Metal Oxide	AA
R411	VRS-CZ1JF154JY	150k	1/16W	Metal Oxide	AA
R412	VRS-CZ1JF334JY	330k	1/16W	Metal Oxide	AA
R413	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R414	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R415	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R416	VRS-CZ1JF823JY	82k	1/16W	Metal Oxide	AA
R418	VRS-CZ1JF101JY	100	1/16W	Metal Oxide	AA
R428	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R431	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R432	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R436	VRS-CZ1JF224JY	220k	1/16W	Metal Oxide	AA
R437	VRS-CZ1JF224JY	220k	1/16W	Metal Oxide	AA
R438	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R440	VRS-CZ1JF393JY	39k	1/16W	Metal Oxide	AA
R441	VRS-CZ1JF563JY	56k	1/16W	Metal Oxide	AA
R442	VRS-CZ1JF114JY	110k	1/16W	Metal Oxide	AA
R443	VRS-CZ1JF105JY	1M	1/16W	Metal Oxide	AA
R446	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R462	VRS-CZ1JF103JY	10k	1/16W	Metal Oxide	AA
R463	VRS-CZ1JF103JY	10k	1/16W	Metal Oxide	AA
R467	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R468	VRS-CZ1JF000JY	0	1/16W	Metal Oxide	AA
R471	VRS-CZ1JF472JY	4.7k	1/16W	Metal Oxide	AA
R477	VRS-CZ1JF823JY	82k	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R478	VRS-CZ1JF823JY		82k 1/16W Metal Oxide	AA
R600	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R601	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R602	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R603	VRS-CZ1JF121JY		120 1/16W Metal Oxide	AA
R604	VRS-CZ1JF121JY		120 1/16W Metal Oxide	AA
R605	VRS-CZ1JF473JY		47k 1/16W Metal Oxide	AA
R606	VRS-CZ1JF154JY		150k 1/16W Metal Oxide	AA
R607	VRS-CZ1JF154JY		150k 1/16W Metal Oxide	AA
R608	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R609	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R610	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R611	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R612	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R613	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R614	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R615	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R616	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R617	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R618	VRS-CZ1JF333JY		33k 1/16W Metal Oxide	AA
R619	VRS-CZ1JF123JY		12k 1/16W Metal Oxide	AA
R620	VRS-CZ1JF123JY		12k 1/16W Metal Oxide	AA
R621	VRS-CZ1JF333JY		33k 1/16W Metal Oxide	AA
R622	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R623	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R624	VRS-CZ1JF333JY		33k 1/16W Metal Oxide	AA
R625	VRS-CZ1JF333JY		33k 1/16W Metal Oxide	AA
R626	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R627	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R628	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R629	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R630	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R631	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R632	VRS-CZ1JF683JY		68k 1/16W Metal Oxide	AA
R633	VRS-CZ1JF393JY		39k 1/16W Metal Oxide	AA
R634	VRS-CZ1JF393JY		39k 1/16W Metal Oxide	AA
R635	VRS-CZ1JF682JY		6.8k 1/16W Metal Oxide	AA
R636	VRS-CZ1JF682JY		6.8k 1/16W Metal Oxide	AA
R637	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R638	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R639	VRS-CZ1JF683JY		68k 1/16W Metal Oxide	AA
R644	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R645	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R649	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R650	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R651	VRS-CZ1JF562JY		5.6k 1/16W Metal Oxide	AA
R652	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R653	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R654	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R655	VRS-CZ1JF472JY		4.7k 1/16W Metal Oxide	AA
R656	VRS-CZ1JF472JY		4.7k 1/16W Metal Oxide	AA
R657	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R658	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R659	VRS-CZ1JF681JY		680 1/16W Metal Oxide	AA
R660	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R661	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R701	VRS-CZ1JF000JY		0 1/16W Metal Oxide (MC500K)	AA
R701	VRS-CZ1JF152JY		1.5k 1/16W Metal Oxide (MC500U)	AA
R702	VRS-CZ1JF750JY		75 1/16W Metal Oxide	AA
R703	VRS-CZ1JF562JY		5.6k 1/16W Metal Oxide	AA
R704	VRS-CZ1JF273JY		27k 1/16W Metal Oxide	AA
R705	VRS-CZ1JF224JY		220k 1/16W Metal Oxide	AA
R706	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R707	VRS-CZ1JF184JY		180k 1/16W Metal Oxide	AA
R708	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R709	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R710	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R711	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R712	VRS-CZ1JF333JY		33k 1/16W Metal Oxide	AA
R713	VRS-CZ1JF101JY		100 1/16W Metal Oxide	AA
R714	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R715	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R716	VRS-CZ1JF272JY		2.7k 1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R717	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R718	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R719	VRS-CZ1JF101JY		100 1/16W Metal Oxide	AA
R720	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R721	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R722	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R723	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R724	VRS-CZ1JF823DY		82k 1/16W Metal Oxide	AA
R725	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R726	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R727	VRS-CZ1JF106JY		10M 1/16W Metal Oxide	AA
R728	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R729	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R730	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R731	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R732	VRS-CZ1JF474DY		470k 1/16W Metal Oxide	AA
R733	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R734	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R735	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R736	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R737	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R738	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R739	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R740	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R741	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R742	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R743	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R745	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R746	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R747	VRS-CZ1JF683JY		68k 1/16W Metal Oxide	AA
R748	VRS-CZ1JF105JY		1M 1/16W Metal Oxide	AA
R749	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R750	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R751	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R752	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R753	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R754	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R755	VRS-CZ1JF332JY		3.3k 1/16W Metal Oxide	AA
R756	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R760	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R761	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R762	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R763	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R764	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R765	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R766	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R767	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R771	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R772	VRS-CZ1JF474JY		470k 1/16W Metal Oxide	AA
R779	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R780	VRS-CY1JF000JY		0 1/16W Metal Oxide	AA
R782	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R796	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R797	VRS-CZ1JF104JY		100k 1/16W Metal Oxide	AA
R900	VRS-CZ1JF224DY		220k 1/16W Metal Oxide	AA
R901	VRS-CZ1JF823DY		82k 1/16W Metal Oxide	AA
R902	VRS-CZ1JF472JY		4.7k 1/16W Metal Oxide	AA
R903	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R904	VRS-CZ1JF123JY		12k 1/16W Metal Oxide	AA
R905	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R906	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R907	VRS-CZ1JF822JY		8.2k 1/16W Metal Oxide	AA
R908	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R909	VRS-CZ1JF562DY		5.6k 1/16W Metal Oxide	AA
R910	VRS-CZ1JF272DY		2.7k 1/16W Metal Oxide	AB
R912	VRS-CZ1JF473JY		47k 1/16W Metal Oxide	AA
R913	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R914	VRS-CZ1JF105JY		1M 1/16W Metal Oxide	AA
R917	VRS-CZ1JF471JY		470 1/16W Metal Oxide	AA
R918	VRS-CZ1JF472DY		4.7k 1/16W Metal Oxide	AB
R919	VRS-CZ1JF103DY		10k 1/16W Metal Oxide	AA
R920	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R924	VRS-CZ1JF113DY		11k 1/16W Metal Oxide	AA
R926	VRS-CZ1JF333DY		33k 1/16W Metal Oxide	AA
R927	VRS-CZ1JF683DY		68k 1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R928	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R929	VRS-CZ1JF823DY	82k	1/16W Metal Oxide	AA
R930	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R931	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R933	VRS-CZ1JF683JY	68k	1/16W Metal Oxide	AA
R934	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R935	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA
R936	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R937	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R938	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R939	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R940	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
R941	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R942	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R943	VRS-CZ1JF303DY	30k	1/16W Metal Oxide	AA
R946	VRS-CZ1JF163DY	16k	1/16W Metal Oxide	AA
R948	VRS-CZ1JF473DY	47k	1/16W Metal Oxide	AA
R949	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R950	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R951	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R952	VRS-CZ1JF223DY	22k	1/16W Metal Oxide	AB
R954	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA
R955	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R956	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R957	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA
R959	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
R960	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R962	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R965	VRS-CZ1JF122DY	1.2k	1/16W Metal Oxide	AA
R966	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R968	VRS-CZ1JF222DY	2.2k	1/16W Metal Oxide	AA
R970	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R972	VRS-CZ1JF133DY	13k	1/16W Metal Oxide	AA
R973	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R974	VRS-CZ1JF102DY	1k	1/16W Metal Oxide	AA
R975	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R977	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R979	VRS-CZ1JF104DY	100k	1/16W Metal Oxide	AA
R980	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R982	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA
R983	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA
R987	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R988	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R989	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R990	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R995	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R996	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R999	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R1201	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1202	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R1402	VRS-CZ1JF470JY	47	1/16W Metal Oxide	AA
R1403	VRS-CZ1JF470JY	47	1/16W Metal Oxide	AA
R1404	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA
R1405	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1406	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1413	VRS-CZ1JF470JY	47	1/16W Metal Oxide	AA
R1414	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA
R1419	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA
R1422	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1423	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1424	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1431	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R1432	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R1433	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R1434	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R1435	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R1436	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R1437	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R1438	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R1439	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
R1440	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R1441	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R1442	VRS-CZ1JF750JY	75	1/16W Metal Oxide	AA
R1462	VRS-CZ1JF474DY	470k	1/16W Metal Oxide	AA
R1471	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1472	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1475	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R1476	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1477	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R1478	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R1479	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R1480	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R1700	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R1701	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R1702	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R1703	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R1704	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1705	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA
R1706	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R1707	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1708	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
R1709	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
R1710	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
R1711	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
R1712	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R1713	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R1714	VRS-CZ1JF621JY	620	1/16W Metal Oxide	AA
R1715	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1716	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R1717	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R1718	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
R1719	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1720	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1721	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1722	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R1723	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R1724	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R1726	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R1727	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1728	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R1912	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R1913	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R1914	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R1916	VRS-CZ1JF180JY	18	1/16W Metal Oxide	AA
R1925	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R1927	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
R1929	VRS-CZ1JF163DY	16k	1/16W Metal Oxide	AA
R1930	VRS-CZ1JF182DY	1.8k	1/16W Metal Oxide	AA
R1931	VRS-CZ1JF472DY	4.7k	1/16W Metal Oxide	AB
R1940	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R1941	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1943	VRS-CZ1JF393DY	39k	1/16W Metal Oxide	AA
R1944	VRS-CZ1JF222DY	2.2k	1/16W Metal Oxide	AA
R1945	VRS-CZ1JF183DY	18k	1/16W Metal Oxide	AA
R1952	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1956	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R1957	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R1958	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1959	VRS-CZ1JF273DY	27k	1/16W Metal Oxide	AA
R1990	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R1991	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R1992	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R1994	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1995	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1996	VRS-CZ1JF163DY	16k	1/16W Metal Oxide	AA
R1997	VRS-CZ1JF182DY	1.8k	1/16W Metal Oxide	AA
R1998	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R2801	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R2802	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R2803	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R2804	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R2806	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R2807	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R2811	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R2812	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R2813	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R2814	VRS-CZ1JF563JY	56k	1/16W Metal Oxide	AA
R2815	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R2818	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R2819	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R2820	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R2821	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA
R2822	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R2823	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R2824	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R2825	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R2829	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R2830	VRS-CZ1JF683JY	68k	1/16W Metal Oxide	AA
R2831	VRS-CY1JFR22JY	0.22	1/16W Metal Oxide	AA
R2833	VRS-CZ1JF102DY	1k	1/16W Metal Oxide	AA
R2835	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
R2840	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R2851	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R2852	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R2853	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R2856	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R2857	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R2858	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R2859	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R2860	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R2861	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R2862	VRS-CZ1JF182DY	1.8k	1/16W Metal Oxide	AA
R2863	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R3401	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R3402	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R3404	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R3406	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R3407	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R3409	VRS-CZ1JF121JY	120	1/16W Metal Oxide	AA
R3410	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R3411	VRS-CZ1JF391JY	390	1/16W Metal Oxide	AA
R3412	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R3413	VRS-CZ1JF391JY	390	1/16W Metal Oxide	AA
R3414	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3415	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R3416	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R3417	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R3418	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R3419	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R3420	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R3421	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA
R3422	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R3423	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R3424	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R3425	VRS-CZ1JF122DY	1.2k	1/16W Metal Oxide	AA
R3427	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R3428	VRS-CZ1JF273DY	27k	1/16W Metal Oxide	AA
R3429	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R3430	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
R3432	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA
R3435	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R3436	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R3437	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R3442	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R3445	VRS-CZ1JF122DY	1.2k	1/16W Metal Oxide	AA
R3451	VRS-CZ1JF334JY	330k	1/16W Metal Oxide	AA
R3452	VRS-CZ1JF820JY	82	1/16W Metal Oxide	AA
R3454	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3457	VRS-CZ1JF820JY	82	1/16W Metal Oxide	AA
R3462	VRS-CZ1JF271JY	270	1/16W Metal Oxide	AA
R3463	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R3468	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R3469	VRS-CZ1JF390JY	39	1/16W Metal Oxide	AA
R3470	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R3471	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
R3472	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R3473	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R3478	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
R3479	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA
R3480	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA
R3481	VRS-CZ1JF680JY	68	1/16W Metal Oxide	AB
R3482	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R3486	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3487	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
R3488	VRS-CZ1JF681DY	680	1/16W Metal Oxide	AB
R3489	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R3492	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R3493	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3495	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3496	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R3499	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R3701	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3702	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3703	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3704	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R3705	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3706	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3708	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3709	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3710	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3711	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R3712	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R3713	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3714	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3715	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R3716	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3718	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3719	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3720	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3721	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3737	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3742	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R3743	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R4401	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4402	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4403	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4404	VRS-CZ1JF472DY	4.7k	1/16W Metal Oxide	AB
R4408	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4414	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4415	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4435	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R4436	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
R4437	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
R4451	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R4453	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R4454	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R4456	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R4460	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4461	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
R4462	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
R4463	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R4465	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4466	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R4471	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R4472	VRS-CZ1JF152DY	1.5k	1/16W Metal Oxide	AA
R4485	VRS-CZ1JF224JY	220k	1/16W Metal Oxide	AA
R4486	VRS-CZ1JF224JY	220k	1/16W Metal Oxide	AA
R4487	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R4488	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R4489	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R4494	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4495	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R5701	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R5702	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R5703	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R5704	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA
R5705	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA
R5707	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R5708	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R5710	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R5711	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R5712	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R5713	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R5715	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R5716	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R5717	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R7401	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R7402	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R7403	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R7413	VRS-CZ1JF512DY	5.1k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R7415	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R7416	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R7417	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R7418	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R7419	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R7420	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R7422	VRS-CZ1JF392DY	3.9k	1/16W Metal Oxide	AA
R7423	VRS-CZ1JF392DY	3.9k	1/16W Metal Oxide	AA
R7424	VRS-CZ1JF242DY	2.4k	1/16W Metal Oxide	AA
R7426	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R7427	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R7428	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R7429	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R7800	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R7809	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R7811	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R7819	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R7820	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R7822	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R7826	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R7827	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R7828	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R7829	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R7830	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R7831	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R7832	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R7833	VRS-CZ1JF334JY	330k	1/16W Metal Oxide	AA
R7834	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R7835	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R7836	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R7837	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R7838	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R7839	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R9920	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R9921	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA

BALUNES

FB201	RBLN-0049TAZZY	Balun, BLN-0049TA	AA
FB203	RBLN-0049TAZZY	Balun, BLN-0049TA	AA
FB204	RBLN-0049TAZZY	Balun, BLN-0049TA	AA
FB456	RBLN-0102TAZZY	Balun, BLN-0102TA	AB
FB600	RBLN-0120TAZZY	Balun, BLN-0120TA	AC
FB900	RBLN-0119TAZZY	Balun, BLN-0119TA	AC
FB901	RBLN-0119TAZZY	Balun, BLN-0119TA	AC
FB2801	RBLN-0028TAZZY	Balun, BLN-0028TA	AB
FB3701	RBLN-0049TAZZY	Balun, BLN-0049TA	AA
FB4405	RBLN-0102TAZZY	Balun, BLN-0102TA	AB
FB4461	RBLN-0102TAZZY	Balun, BLN-0102TA	AB
FB7401	RBLN-0102TAZZY	Balun, BLN-0102TA	AB

MISCELLANEOUS PARTS

⚠	CP4	QPRTRA010WJZZY	0.5A 50V(MC500U)	AC
	J600	QJAKE0060TAZZ	Jack, 4Pin	AE
	J1401	QJAKE0080TAZZY	Jack, 8Pin	AG
	J5701	QJAKEA014WJZZ	Jack, 5Pin	AE
	J7401	QJAKZA007WJZZ	Jack, 4Pin	AE
	P600	QPLGN0276TAZZY	Plug, 2Pin	AD
	P1200	QPLGN1475TAZZY	Plug, 14Pin	AE
	RMC701	RRMCU0021TAZZY	Remote Receiver	AK
	SC900	QCNCW2080TAZZY	Connector, 20Pin	AF
	SC1201	QSOCN3311TAN1Y	Socket, 33Pin	AG
	SC1202	QSOCN3311TAN1Y	Socket, 33Pin	AG
	SC2801	QSOCN2498TAZZY	Socket, 24Pin	AE
	SC2802	QSOCN0807REN1Y	Socket, 8Pin	AB
	SC3301	QCNCW8080TAZZY	Connector, 80Pin	AH
	SC3302	QCNCM1052TAZZY	Connector, 10Pin	AE

Ref. No.	Part No.	★	Description	Code

DUNTKB323QA00
CAMERA PWB UNIT

INTEGRATED CIRCUITS

IC501	RH-iXA307WJPZQ	IXA307WJ	AQ
IC503	VHiMB8346BV-1Y	MB8346BV	AN
IC1002	VHiNJM2902V-1Y	NJM2902V, OP-Amp	AD
IC2501	VHiMM1449XQ-1	MM1449XQ	AT
IC2502	VHiNJM2902V-1Y	NJM2902V, OP-Amp	AD

TRANSISTORS

Q1001	VSKTA2014EY-1Y	KTA2014EY	AB
Q2501	VSRT1N141U/-1Y	RT1N141U	AB
Q2502	VS2SC5383F/-1Y	2SC5383F	AB
Q2503	VSRN1704///-1Y	RN1704	AC
Q2504	VS2SA1588Y/-1Y	2SA1588Y	AC
Q2505	VS2SC5383F/-1Y	2SC5383F	AB
Q2506	VS2SC5383F/-1Y	2SC5383F	AB

DIODE

D551	VHDMC2852//-1Y	MC2852	AB

COILS

FL501	RFiLZA003WJPZY	Filter	AC
L501	VPMAN100MR50NY	Peaking, 10µH	AC

CAPACITORS

C501	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB
C502	VCSATA1AJ106MY	10	10V	Tantalum	AC
C503	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB
C506	VCCCCZ1HH101JY	100p	50V	Ceramic	AB
C507	VCSATA1AJ106MY	10	10V	Tantalum	AC
C509	VCCCCZ1HH101JY	100p	50V	Ceramic	AB
C510	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C512	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C513	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C1002	VCSATA0JJ156MY	15	6.3V	Tantalum	AC
C1003	VCKYCZ1CB223KY	0.022	16V	Ceramic	AC
C1005	VCKYCZ1HB332KY	3300p	50V	Ceramic	AA
C1007	VCKYCZ1AB473KY	0.047	10V	Ceramic	AB
C1010	RC-KZ0099TAZZY	10	6.3V	Ceramic	AD
C1011	VCCCCZ1HH101JY	100p	50V	Ceramic	AB
C1014	VCKYCZ1CB223KY	0.022	16V	Ceramic	AC
C1016	VCSATA0JJ156MY	15	6.3V	Tantalum	AC
C1018	VCKYCY1CF104ZY	0.1	16V	Ceramic	AA
C2501	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2502	VCKYCZ1EB472KY	4700p	25V	Ceramic	AB
C2503	VCSATA1CJ106MY	10	16V	Tantalum	AD
C2504	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2505	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2506	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2507	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2508	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2509	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2510	VCKYCZ1CB103KY	0.01	16V	Ceramic	AB
C2511	VCKYCY1CF104ZY	0.1	16V	Ceramic	AA
C2512	VCKYCZ1EB472KY	4700p	25V	Ceramic	AB
C2513	VCKYCZ1EB472KY	4700p	25V	Ceramic	AB
C2514	VCSATA1AJ106MY	10	10V	Tantalum	AC
C2516	VCKYCY1AB224KY	0.22	10V	Ceramic	AB
C2517	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB
C2518	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C2519	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C2520	VCCCCZ1HH151JY	150p	50V	Ceramic	AB
C2521	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB

RESISTORS

R501	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R502	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R503	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R504	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R505	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R506	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R507	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R508	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R509	VRS-CZ1JF273JY		27k 1/16W Metal Oxide	AA
R510	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R512	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R513	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R514	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R515	VRS-CZ1JF000JY		0 1/16W Metal Oxide	AA
R556	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R581	VRS-CZ1JF562JY		5.6k 1/16W Metal Oxide	AA
R1001	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R1003	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R1005	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R1007	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R1009	VRS-CZ1JF154DY		150k 1/16W Metal Oxide	AB
R1011	VRS-CZ1JF274JY		270k 1/16W Metal Oxide	AA
R1012	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R1013	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R1014	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R1015	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R1016	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R1017	VRS-CZ1JF154DY		150k 1/16W Metal Oxide	AB
R1018	VRS-CZ1JF100JY		10 1/16W Metal Oxide	AA
R1019	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R2501	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R2502	VRS-CZ1JF104DY		100k 1/16W Metal Oxide	AA
R2503	VRS-CZ1JF473DY		47k 1/16W Metal Oxide	AA
R2504	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R2505	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R2506	VRS-CZ1JF103DY		10k 1/16W Metal Oxide	AA
R2507	VRS-CZ1JF103DY		10k 1/16W Metal Oxide	AA
R2508	VRS-CZ1JF622DY		6.2k 1/16W Metal Oxide	AA
R2509	VRS-CZ1JF104DY		100k 1/16W Metal Oxide	AA
R2510	VRS-CZ1JF822DY		8.2k 1/16W Metal Oxide	AA
R2511	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R2512	VRS-CZ1JF105JY		1M 1/16W Metal Oxide	AA
R2513	VRS-CZ1JF153DY		15k 1/16W Metal Oxide	AA
R2514	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R2515	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R2516	VRS-CZ1JF154JY		150k 1/16W Metal Oxide	AA
R2517	VRS-CZ1JF181JY		180 1/16W Metal Oxide	AA
R2518	VRS-CZ1JF102JY		1k 1/16W Metal Oxide	AA
R2519	VRS-CZ1JF153JY		15k 1/16W Metal Oxide	AA
R2520	VRS-CZ1JF122JY		1.2k 1/16W Metal Oxide	AA
R2521	VRS-CZ1JF223JY		22k 1/16W Metal Oxide	AA
R2522	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R2523	VRS-CZ1JF471JY		470 1/16W Metal Oxide	AA
R2524	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA
R2525	VRS-CZ1JF474JY		470k 1/16W Metal Oxide	AA
R2526	VRS-CZ1JF222JY		2.2k 1/16W Metal Oxide	AA
R2527	VRS-CZ1JF472JY		4.7k 1/16W Metal Oxide	AA
R2528	VRS-CZ1JF682JY		6.8k 1/16W Metal Oxide	AA
R2529	VRS-CZ1JF152JY		1.5k 1/16W Metal Oxide	AA
R2530	VRS-CZ1JF474JY		470k 1/16W Metal Oxide	AA
R2531	VRS-CZ1JF682JY		6.8k 1/16W Metal Oxide	AA
R2532	VRS-CZ1JF180JY		18 1/16W Metal Oxide	AA
R2533	VRS-CZ1JF100JY		10 1/16W Metal Oxide	AA
R2534	VRS-CZ1JF394JY		390k 1/16W Metal Oxide	AA
R2535	VRS-CZ1JF103JY		10k 1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

SC501	QSOCN1707REN1Y	Socket,17Pin	AC
SC1001	QCNCW3396TAZZY	Connector, 33Pin	AG
SC1002	QCNCWA040WJZZY	Connector, 27Pin	AE
SC2501	QSOCN2090TAZZY	Socket, 20Pin	AD

DUNTKB324QA00
CARD PWB UNIT

INTEGRATED CIRCUIT

IC6600	VHiNJM2140R-1Y	NJM2140R	AD

TRANSISTORS

Q1500	VSHN2C01FU/-1Y	HN2C01FU	AC
Q1501	VSKTA2014EY-1Y	KTA2014EY	AB
Q6600	VSKTC4075EY-1Y	KTC4075EY	AB

CAPACITORS

C1500	VCSATA0JJ336MY	33	6.3V	Tantalum	AD
C1512	VCCCCZ1HH330JY	33p	50V	Ceramic	AB
C1516	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C1530	VCCCCZ1HH330JY	33p	50V	Ceramic	AB
C1531	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB
C1532	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB
C6600	VCSATA1AJ106MY	10	10V	Tantalum	AC
C6601	VCKYCZ1HF103ZY	0.01	50V	Ceramic	AB
C6602	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C6603	VCKYCZ1HB102KY	1000p	50V	Ceramic	AB
C6607	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C6609	VCKYCY0JB105KY	1	6.3V	Ceramic	AC
C6610	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB
C6611	VCKYCZ1AB104KY	0.1	10V	Ceramic	AB

RESISTORS

R1500	VRS-CZ1JF222DY	2.2k	1/16W Metal Oxide	AA
R1502	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
R1503	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R1505	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R1506	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1507	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1512	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1513	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1514	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1515	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1516	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R1517	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R6600	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R6601	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
R6602	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
R6603	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R6605	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA
R6606	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R6607	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA
R6608	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
R6609	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA
R6610	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

P1504	QPLGN0276TAZZY	Plug, 2Pin	AD
P6600	QPLGN0374TAZZY	Plug, 3Pin	AC
SC1501	QSOCZA039WJZZY	Socket, 15Pin	AK
SC1502	QSOCN1207REN1Y	Socket, 12Pin	AD
SC1503	QCNCW3396TAZZY	Connector, 33Pin	AG

DUNTKB325QA00
INVERTER PWB UNIT

TRANSISTOR

Q9801	VSCPH5504++-1Y	CPH5504++	AE

COIL AND TRANSFORMER

L9801	RCiLP0349TAZZY	Coil, 33µH	AD
⚠ T9800	RTRNZA014WJZZY	Transformer	AG

CAPACITORS

C9800	RC-KZ0055TAZZY	3.3	16V	Ceramic	AD
C9802	VCKYCZ1AF104ZY	0.1	10V	Ceramic	AB
C9807	RC-CZ0061TAZZY	0.022	25V	Ceramic	AD
C9810	VCKYCY1HB332KY	3300p	50V	Ceramic	AA
C9812	RC-KZ0351CEZZY	18p	3kV	Ceramic	AD

RESISTORS

R9803	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R9804	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R9808	VRS-CZ1JF271DY	270	1/16W Metal Oxide	AA
R9809	VRS-CZ1JF271DY	270	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description			Code
			MISCELLANEOUS PARTS			
SC9801	QSOCN0871TAZZY		Socket, 8Pin			AC
SC9802	QCNCWA002WJZZY		Connector, 4Pin			AE
SW9800	QSW-M0019TAZZY		Switch			AC

DUNTKB322QA00 CCD PWB UNIT

			INTEGRATED CIRCUITS			
IC21	VHiMN52A6CD-1Q		MN52A6CD			AU
IC22	VHiUPD16510-1Y		UPD16510			AR
IC101	VHiH49334HN-1Y		H49334HN			AS
			TRANSISTORS			
Q1	VS2SC4627CD-1Y		2SC4627CD			AB
Q21	VSCPH3206//-1Y		CPH3206			AD
			DIODES			
D1	VHDMC2852//-1Y		MC2852			AB
D2	VHDMC2852//-1Y		MC2852			AB
			PACKAGED CIRCUIT			
X21	RCRSZ0083TAZZY		Crystal, CRSZ0083TA			AS
			COILS			
L23	VPCEM100MR70NY		Peaking, 10µH			AC
L101	VPD9M100KR86NY		Peaking, 10µH			AC
L102	VPD9M680J8R6NY		Peaking, 68µH			AC
			CAPACITORS			
C1	VCSATA1CJ106MY		10	16V	Tantalum	AD
C2	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C3	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C4	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C5	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C6	VCKYTV1EB104KY		0.1	25V	Ceramic	AB
C7	VCSATE1VJ335MY		3.3	35V	Tantalum	AD
C8	RC-KZ0046TAZZY		4.7	35V	Ceramic	AD
C9	VCKYCY1EF104ZY		0.1	25V	Ceramic	AA
C21	VCSATA1EJ225MY		2.2	25V	Tantalum	AB
C22	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C23	VCSATA1EJ225MY		2.2	25V	Tantalum	AB
C24	VCSATA1CJ106MY		10	16V	Tantalum	AD
C27	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C29	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C30	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C32	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C33	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C34	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C36	VCKYCZ1HB102KY		1000p	50V	Ceramic	AB
C37	VCSATA1AJ106MY		10	10V	Tantalum	AC
C38	VCSAPR1AJ475MY		4.7	10V	Tantalum	AD
C39	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C40	VCSATA0JJ156MY		15	6.3V	Tantalum	AC
C42	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C43	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C44	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C45	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C47	VCCCCZ1HH221JY		220p	50V	Ceramic	AB
C92	VCKYCZ1HF103ZY		0.01	50V	Ceramic	AB
C101	VCKYCZ1CB153KY		0.015	16V	Ceramic	AB
C103	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C104	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C105	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C106	VCKYCZ1AB104KY		0.1	10V	Ceramic	AB
C107	VCKYTV1CB105KY		1	16V	Ceramic	AC
C108	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C109	VCSATA0JJ156MY		15	6.3V	Tantalum	AC
C110	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C111	VCKYCY0JB105KY		1	6.3V	Ceramic	AC
C112	VCCCCZ1HH221JY		220p	50V	Ceramic	AB
C113	VCKYCZ1CB103KY		0.01	16V	Ceramic	AB
C114	VCKYCZ1AF104ZY		0.1	10V	Ceramic	AB
C115	VCSATA0JJ156MY		15	6.3V	Tantalum	AC
C116	VCCCCZ1HH221JY		220p	50V	Ceramic	AB
			RESISTORS			
R3	VRS-CZ1JF102JY		1k	1/16W	Metal Oxide	AA
R4	VRS-CZ1JF392JY		3.9k	1/16W	Metal Oxide	AA
R5	VRS-CZ1JF105JY		1M	1/16W	Metal Oxide	AA
R6	VRS-CZ1JF104JY		100k	1/16W	Metal Oxide	AA
R7	VRS-CZ1JF105JY		1M	1/16W	Metal Oxide	AA
R21	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R22	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R23	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R24	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R26	VRS-CZ1JF104JY		100k	1/16W	Metal Oxide	AA
R27	VRS-CZ1JF821JY		820	1/16W	Metal Oxide	AA
R28	VRS-CZ1JF562JY		5.6k	1/16W	Metal Oxide	AA
R29	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R30	VRS-CZ1JF102JY		1k	1/16W	Metal Oxide	AA
R31	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R32	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R33	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R34	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R35	VRS-CZ1JF331JY		330	1/16W	Metal Oxide	AA
R36	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R37	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R38	VRS-CZ1JF100JY		10	1/16W	Metal Oxide	AA
R39	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R41	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R43	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R102	VRS-CZ1JF000JY		0	1/16W	Metal Oxide	AA
R103	VRS-CZ1JF333JY		33k	1/16W	Metal Oxide	AA
R106	VRK-SA1JF101JY		100	1/16W	Metal Composition	AC
R107	VRK-SA1JF101JY		100	1/16W	Metal Composition	AC
R108	VRK-SA1JF101JY		100	1/16W	Metal Composition	AC
R109	VRK-SA1JF101JY		100	1/16W	Metal Composition	AC
R110	VRK-SA1JF101JY		100	1/16W	Metal Composition	AC
			MISCELLANEOUS PARTS			
	PSLDMA014WJFW		Shield			AC
	PSHEGA008WJZZ		Sheet			AD
P101	QPLGN0376TAZZY		Plug, 3Pin			AD
P102	QPLGN1474TAZZY		Plug, 14Pin			AE
RMC91	RSNSG0012CEZZ		Gyro Sensor			AX
SC101	QCNCWA040WJZZY		Connector, 27Pin			AE

RAMP-0035TAN0 HEAD AMP PWB UNIT

		INTEGRATED CIRCUITS	
IC301	VHiBH7275KV-1	BH7275KV, REC/PB Amp IC	AU
IC302	VHiM24C04W6-1	M24C04W6, E²PROM IC	AE
		TRANSISTORS	
Q302	VS2SC4738Y/-1	2SC4738Y	AA
	or		
	VS2SC4617B/-1	2SC4617B	AA
	or		
	VS2SC5383F/-1	2SC5383F	AB
Q303	VS2SC4738Y/-1	2SC4738Y	AA
	or		
	VS2SC4617B/-1	2SC4617B	AA
	or		
	VS2SC5383F/-1	2SC5383F	AB

Ref. No.	Part No.	★	Description	Code
	COIL			
L301	VPAWM4R7MR70N		Coil, 4.7µH	AC
	CAPACITORS			
C301	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C302	VCKYCZ1HF103Z		0.01 50V Ceramic	AB
C303	VCSATE1AJ336M		33 10V Tantalum	AG
C304	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C305	VCCCCY1HH331J		330p 50V Ceramic	AA
C306	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C307	VCCCCY1HH331J		330p 50V Ceramic	AA
C308	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C309	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C310	VCKYCZ1HF103Z		0.01 50V Ceramic	AB
C311	VCKYCZ1HF103Z		0.01 50V Ceramic	AB
C312	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C313	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C314	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C315	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C318	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C319	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C320	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C321	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C322	VCKYCY0JB105K		1 6.3V Ceramic	AC
C323	VCKYCZ1HB102K		1000p 50V Ceramic	AB
C324	VCKYCZ1HF103Z		0.01 50V Ceramic	AB
C327	VCKYCZ1EB472K		4700p 25V Ceramic	AB
C329	VCSATA1AJ106M		10 10V Tantalum	AC
C330	VCKYCZ1HF103Z		0.01 50V Ceramic	AB
C331	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C332	VCKYCZ1EB472K		4700p 25V Ceramic	AB
C333	VCKYCZ1CB822K		8200p 16V Ceramic	AB
C340	VCCCCZ1HH5R0C		5p 50V Ceramic	AC
C342	VCCCCZ1HH5R0C		5p 50V Ceramic	AC
C343	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C344	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
C345	VCKYCZ1AF104Z		0.1 10V Ceramic	AB
	RESISTORS			
R304	VRS-CZ1JF222J		2.2k 1/16W Metal Oxide	AA
R308	VRS-CZ1JF122J		1.2k 1/16W Metal Oxide	AA
R309	VRS-CZ1JF512J		5.1k 1/16W Metal Oxide	AB
R310	VRS-CZ1JF433J		43k 1/16W Metal Oxide	AA
R311	VRS-CZ1JF101J		100 1/16W Metal Oxide	AA
R312	VRS-CZ1JF102J		1k 1/16W Metal Oxide	AA
R313	VRS-CZ1JF822J		8.2k 1/16W Metal Oxide	AA
R314	VRS-CZ1JF101J		100 1/16W Metal Oxide	AA
R315	VRS-CZ1JF102J		1k 1/16W Metal Oxide	AA
R316	VRS-CZ1JF473J		47k 1/16W Metal Oxide	AA
R317	VRS-CZ1JF563J		56k 1/16W Metal Oxide	AA
R318	VRS-CZ1JF513J		51k 1/16W Metal Oxide	AA
R319	VRS-CZ1JF182J		1.8k 1/16W Metal Oxide	AA
R320	VRS-CZ1JF182J		1.8k 1/16W Metal Oxide	AA
R321	VRS-CZ1JF682J		6.8k 1/16W Metal Oxide	AA
R324	VRS-CZ1JF222J		2.2k 1/16W Metal Oxide	AA
R330	VRS-CZ1JF563J		56k 1/16W Metal Oxide	AA
R332	VRS-CZ1JF102J		1k 1/16W Metal Oxide	AA
R333	VRS-CZ1JF222J		2.2k 1/16W Metal Oxide	AA
R377	VRS-CZ1JF000J		0 1/16W Metal Oxide	AA
R380	VRS-TV1JD100J		10 1/16W Metal Oxide	AA
	MISCELLANEOUS PARTS			
P306	QCNCM8082TAZZ		Plug, 80Pin	AK
SC301	QSOCN0925TAN1		Connector, 9Pin	AE
SC303	QSOCN1006TAN1		Connector, 10Pin	AE
SC304	QSOCN0706TAN1		Connector, 7Pin	AE
SC305	QSOCN2071TAZZ		Connector, 20Pin	AD
SC306	QSOCN1871TAZZ		Connector, 18Pin	AE

Ref. No.	Part No.	★	Description	Code
	MECHANISM PARTS			
301	LCHSM0181GEZZ		Main Chassis Ass'y	AQ
302	MLEVF0539GEFW		Eject Control Lever	AD
303	MLEVF0502GEFW		Pinch Control Lever	AD
304	NGERH3062GEFW		Main Cam	AD
305	MLEVF0503GEZZ		Shifter Drive Lever Ass'y	AE
306	MLEVF0505GEFW		Loading Lever	AD
307	MARMM0130GEZZ		S Loading Arm Ass'y	AF
308	MARMM0131GEZZ		Tu Loading Arm Ass'y	AF
309	MLEVF0508GEFW		T Arm Control Lever	AD
311	LANGG9121GEFW		CAP FPC Stopper	AD
312	LANGF9016GEZZ		Intermediate Gear ANG Ass'y	AG
313	MARMM0132GEZZ		Swing Arm Ass'y	AG
314	LANGJ0055GEFW		Mechanism Fixing Angle	AH
315	LANGJ0054GEFW		Head amp PWB ANG	AE
324	RDTCH0039GEZZ		Dew Sensor	AD
330	CCHSS0050GE03		Sensor FPC Affixing Slide Chassis	AY
331	LCHSS0050GEZZ		Slide Chassis Ass'y	AN
332	CPWBH6079GE01		Sensor FPC Ass'y	AV
334	LHLDP0104GEZZ		S-LED Holder	AC
335	LHLDP0105GEZZ		Tu-LED Holder	AC
337	LHLDZ0115GEZZ		Sensor FPC Guide	AC
338	QSW-M0035TAZZ		Down SW	AC
339	QTANZ0006GEZZ		Mic Contact SW	AG
340	RH-PX0180TAZZ		Cassette LED	AE
341	RH-PX0211TAZZY		S/E Sensor	AD
342	RDTCM0006TAZZ		Reel Sensor	AC
344	LANGG9124GEFW		Slide Adjustment ANG	AC
345	LANGG9126GEFW		Down Guide	AE
347	TLABH0590GEZZ		Cassette Control Caution Label	AB
351	MLEVF0542GEZZ		Tension Arm Ass'y	AG
352	MLEVF0511GEZZ		Tu Guide Arm Ass'y	AG
353	MLEVF0512GEZZ		Brake Shifter Ass'y	AE
354	LBNDK3022GEZZ		Tension Band Ass'y	AF
355	LANGA0073GEZZ		Reel Cover Ass'y	AG
356	LANGJ0038GEFW		T Spring Hanging ANG	AC
357	MLEVP0302GEZZ		Swing Arm Release Lever	AC
360	MLEVP0329GEZZ		Eject Lever	AC
361	MLEVP0296GEZZ		Pinch Drive Lever	AB
362	PGiDM0156GEZZ		Guide Rail	AC
363	PGiDM0186GEZZ		T Arm Control Lever Stopper	AC
364	NGERH1300GEZZ		Intermediate Gear A Ass'y	AE
365	NGERH1301GEZZ		Intermediate Gear B Ass'y	AB
366	NPLYV0164GEZZ		Intermediate Pulley Ass'y	AC
367	NPLYV0165GEZZ		Center Pulley Ass'y	AC
369	NGERH1302GEZZ		AHC Cam	AB
370	NGERH1303GEZZ		Coupling Gear	AB
371	NGERH1304GEZZ		Sub Cam	AC
372	NGERH1305GEZZ		S Loading Gear	AC
373	NGERH1306GEZZ		Tu Loading Gear	AC
374	MLEVP0333GEZZ		S Main Brake	AC
375	MLEVP0309GEZZ		Tu Main Brake	AB
376	LHLDX1046GEZZ		S Cassette Stay	AC
377	LHLDZ2024GEZZ		FPC Cover	AB
381	PGiDP0031GEFW		Tu Pole	AD
382	PGiDS0046GEFW		T Roller Upper Flange	AE
383	PGiDS0047GEFW		T Roller Bottom Flange	AE
384	NSFTL0761GEFW		T Roller Inner	AE
385	PGiDP0042GEFW		S Guide Sleeve	AD
386	PGiDM0170GEZZ		Slide Chassis Guide	AC
390	MSPRD0184GEFJ		Swing Arm Release SPR.	AC
391	MSPRT0417GEFJ		Main Brake SPR.	AB
392	MSPRT0436GEFW		T Arm SPR.	AB
393	MSPRD0178GEFJ		Tu Guide Arm SPR.	AB
394	MSPRD0179GEFJ		Pinch Lever Return SPR.	AB
395	MSPRD0180GEFJ		S Pressure SPR.	AB
396	MSPRD0181GEFJ		Tu Pressure SPR.	AB
397	MSPRC0220GEFJ		Guide Adjustment SPR.	AA
398	MSPRC0221GEFJ		Drum Fixing SPR.	AA

Ref. No.	Part No.	★	Description	Code
399	MSPRP0185GEZZ		PB Guide SPR.	AC
401	LX-WZ1071GE02		CW ø 0.7 ø 1.8t0.1	AC
402	LX-WZ1104GE06		CW ø 0.7 ø 2.2t0.25	AB
403	LX-WZ1029GE00		CW ø 1.2 ø 3t0.25	AA
411	LZ-WZ1105GE00		W ø 1.2 ø 2.5t0.13	AA
412	LZ-WZ1106GE00		W ø 1.2 ø 2.5t0.2	AA
413	XWHJZ12-03025		W ø 1.2 ø 2.5t0.3	AA
414	XWHJZ12-04025		W ø 1.2 ø 2.5t0.4	AA
415	XWHJZ12-05025		W ø 1.2 ø 2.5t0.5	AA
420	LX-BZ3202GEFF		Swing Arm Release Lever Fixing Screw	AC
421	LHLDZ2025GEZZ		Intermediate Gear Stopper	AB
425	LX-BZ0107GEFF		Special Screw M1.2 x L1	AB
426	LX-BZ0108GEFF		Special Screw M1.2 x L3.3	AA
428	LX-NZ0102GEFW		S Guide Hexagon Nut	AC
429	LX-BZ3203GEFF		Type 1 Minuteness Screw M1.4 x L1	AB
430	LX-BZ3185GEFN		Special Screw M1.4 x L2	AB
431	LX-BZ3135GEFF		Type 2 Minuteness Screw M1.4 x L1	AA
432	LX-BZ3201GEFF		Special Head Screw M1.4 x L2	AB
433	LX-BZ3132GEFF		Special Head Screw M1.4 x L1.5	AA
434	LX-BZ3131GEFN		Special Screw M1.4 x L1.6	AA
435	LX-HZ3089GEFF		S Tight Screw M1.4 x L2	AA
436	LX-HZ3076GEFF		S Tight Screw M1.4 x L3	AA
437	LX-HZ3088GEFF		L Motor Installation Screw	AB
438	LX-BZ3225GEFF		Drum Installation Screw	AC
439	LX-BZ3181GEFN		GR Lock Screw	AD
440	LX-HZ3084GEFF		S Tight Screw M1.4 x L4	AC
451	LPOLM0065GEZZ		Sup Pole Base Ass'y	AK
452	LPOLM0066GEZZ		Tu Pole Base Ass'y	AK
453	CGiDM0158GE03		Drum Base Ass'y	AH
454	NROLM0046GEZZ		Guide Roller Ass'y	AM
455	NROLM0045GEZZ		T Roller Ass'y	AK
456	NDAiV1076GEZZ		S Reel Base Ass'y	AM
457	NDAiV1077GEZZ		Tu Reel Base Ass'y	AK
458	MLEVF0526GEZZ		Pinch Lever Ass'y	AP
459	NBLTT0016GEZZ		Drive Belt	AD
461	RMOTM1080GEZZ		L Motor Ass'y	AQ
462	RMOTV1023GEZZ		Capstan Motor	AY
463	QSW-R0039GEZZ		Mode SW	AE
465	QPWBH5911GEZZ		LM/Mode FPC	AG
466	PDMP-0032GEZZ		Damper	AF
470	DDRMV0070GE05		Drum Ass'y	
500	RAMP-0035TAN0		Head Amp PWB Unit	—
501	PSLDM3352TAFW		H/A FPC Shield Plate	AX
502	LANGG9125GEFW		Sensor FPC Cover	AC

CASSETTE CONTROL PARTS

600	CHLDX3093GE01		Cassette Control Ass'y	AT
601	LHLDX3093GEZZ		Housing Ass'y	AT
602	LANGF9655GEZZ		Top Cover Ass'y	AG
603	MSPRT0434GEFJ		Lock SPR	AB
604	MSPRT0435GEFJ		UP-SPR	AB
610	TLABH0589GEZZ		Cassette Control Lock Label	AB
434	LX-BZ3131GEFN		Special Screw M1.4 x L1.6	AA

Ref. No.	Part No.	★	Description	Code

CABINET PARTS LIST

1-1	TLABMA117WJZZ		Model Label(MC500U)	AD
1-1	TLABMA128WJZZ		Model Label(MC500K)	AD
1-2	GFTABA001WJSA		Lithium Battery Lid	AF
1-11	GCOVHA003WJSA		Adjustment Connector Cover	AE
5	DCOVAA046WJK1		VTR Side Cover, For Service(MC500K)	AS
5	DCOVAA046WJK2		VTR Side Cover, For Service(MC500U)	AT
5-2	GCOVHA001WJSA		Terminal Cover	AG
5-7	PMLT-A023WJZZ		Side Cover Cushion A	AB
5-8	TLABH0555TAZZ		Caution Label(MC500U)	AB
6	DFTACA010WJK1		Cassette Lid, For Service	BC
6-1	GCOVAA047WJKA		VTR Grip Cover	AF
6-2	GCOVAA048WJZZ		L Cabinet Back Cover	AD
6-3	TLABZ0501TAZZ		Right Artcle Label(MC500K)	AC
6-4	HBDGSA004WJSA		VTR Lid Badge	AE
6-5	JKNBPA001WJSA		Lid Open Knob	AW
6-6	LANGKA014WJ01		Chassis Frame Ass'y	AU
6-16	PSPAG0138TA00		Floating Rubber	AC
6-17	GCOVAA049WJZZ		Cassette Lid Back Cover	AD
6-18	PMLT-A008WJZZ		Dust Protection Sheet A	AC
6-19	PSPAZA076WJZZ		Lid Spacer	AU
7	CCABBA050WJK1		KS LCD Cabinet	AR
7-2	GCOVAA050WJZZ		Remote Control Cover	AB
8	CANGKA025WJ01		KS Tripod Angle	AK
8-2	LANGKA031WJFW		Tripod Screw	AC
8-3	LHLDZA020WJZZ		Tripod Positioning Holder	AC
9	CCABCA001WJK2		KS Camera Front Cabinet	BD
9-3	GCOVAA148WJSA		Camera Lens Cover Front	AT
9-4	GCOVAA056WJSA		Grip Cover	AP
9-5	GCOVAA057WJSA		Grip Decoration Cover	AF
9-6	GCOVAA061WJKA		Camera Front Cabinet Cover	AF
9-7	HiNDPA068WJSA		Lens Nameplate	AE
9-8	JKNBPA003WJSA		Strobe Open Knob	AE
9-9	LANGKA024WJFW		Grip Fixing Bracket	AD
9-10	MSPRCA007WJFJ		Strobe Open Knob Spring	AA
9-11	MSPRPA001WJFW		Grip Rotating Click Spring	AC
9-12	NSFTZA004WJFW		Grip Rotating Shaft	AE
9-13	PMLT-A014WJZZ		Strobe Spacer	AB
9-14	QEARPA024WJFW		Camera Lens Cover Earth Plate	AB
9-15	XRESJ30-06000		Grip Shaft Fixing Ring	AA
9-18	XWHJZ41-05060		Polyslider	AB
9-19	TLABS0102TAZZ		Lightning Mark(MC500U)	AD
10	DCABDA005WJK1		KS Camera Rear Cabinet	BL
10-2	GCOVAA149WJSA		Camera Lens Cover Rear	AT
10-3	GFTASA001WJKA		Card Lid	AG
10-4	GMADi0038TASA		Card Lid Window	AD
10-5	JBTN-A018WJSA		Still Button	AE
10-6	JBTN-A019WJSA		Menu Button	AE
10-7	JKNBPA005WJSA		Card Lid Lock Knob	AB
10-8	LANGKA032WJSA		Hand Strap Fitting	AG
10-9	LHLDZA022WJZZ		Card Lid Knob Holder	AB
10-10	MSPRCA004WJFJ		Lock Knob Spring	AA
10-11	MSPRDA001WJFJ		Card Lid Open/Close Spring	AB
10-12	NSFTZA005WJFW		Card Shaft A	AB
10-14	PCOVPA003WJZZ		Microphone Soundproof Sheet	AA
10-15	PMLT-A013WJZZ		Card Lid Spacer	AA
10-16	QEARPA026WJFW		Still Button Earth Plate	AC
10-28	TLABHA005WJZZ		Lithium Caution Label	AA
11	DCOVAA052WJ01		KS Tilt	AQ
11-2	GCOVAA053WJ01		Tilt Frame C Ass'y	AW
11-3	LANGKA023WJFW		Stopper Angle	AD
11-4	PSPAZA029WJZZ		Norglide Spacer	AF
11-5	PSPAZA030WJZZ		Tilt Spacer	AG
11-6	QEARPA023WJFJ		Stopper Angle Earth Plate	AD
12	CCOVAA060RA02		WS Strobe	
12-2	LHLDZA026WJSA		Strobe Fixing Holder	AF
12-3	NSFTZA006WJFW		Rotating Shaft	AB

Ref. No.	Part No.	★	Description	Code
12-4	MSPRDA011WJFJ		Strobe Up Spring	AD
12-5	PCOVPA005WJZZ		Strobe Soundproof Sheet	AA
12-6	KLMPWA004WJZZ		Strobe Unit	BB
14	CANGKA021WJ01		KS LCD Earth Plate	AG
14-2	PSHEP0228TAZZ		LCD Isolating Sheet	AB
15	CHLDZA015WJ01		KS LCD Holder	AG
15-2	PSHEPA013WJZZ		LCD Fixing Tape	AB
16	DUNTKB321QA01		MAIN PWB Unit(MC500K)	—
16	DUNTKB400QA00		MAIN PWB Unit (MC500U)	—
17	CPWBH2925TA01		Head Amp FPC	AR
18	DUNTKB325QA00		Inverter PWB Unit	—
19	QPWBHB329WJZZ		Inverter FPC	AD
20	DUNTKB323QA00		Camera PWB Unit	—
21	DUNTKB324QA00		Card PWB Unit	—
22	QPWBHB328WJZZ		Strobe=Card FPC	AF
24	LANGK0513TAFW		Speaker Fitting	AC
25	VSP0020P-A1WN		Speaker	AH
26	GCOVAA051WJKA		Battery Cover	AN
27	JKNBPA002WJSA		Battery Lock Knob	AD
28	LHLDZA037WJZZ		Battery Lock Knob Holder	AD
29	MSPRC0152TAFJ		Battery Lock Knob Spring	AA
30	PSHEPA012WJZZ		Battery Cover Blinding Sheet	AB
31	QTANZA005WJZZ		Battery Terminal Unit	AM
32	ZTAPEP109020E		UL Tape	AA
33	GCOVAA059WJKA		Microphone Cover	AG
34	JKNBPA004WJSA		Media Selector Knob	AE
35	LHLDZA021WJZZ		Media Selector Holder	AB
36	LHLDZA023WJZZ		Microphone Holder	AB
37	PCOVPA004WJZZ		Microphone Blinding Sheet	AB
38	PSHEPA033WJZZ		Microphone Earth Blinding Sheet	AB
39	QEARPA025WJFJ		Microphone Earth Plate	AC
40	QSW-ZA012WJZZ		Zoom/Power Supply Unit	AZ
41	QSW-ZA008WJZZ		Still/JOG PWB	AP
42	RMiCCA001WJZZ		Microphone	AM
43	LHLDZA016WJZZ		FPC Holder	AD
44	LHLDZA017WJZZ		Wire Holder Upper	AB
45	LHLDZA018WJZZ		Wire Holder Lower	AB
46	PGiDHA001WJFW		FPC Guide Plate	AB
47	PSPAZA077WJZZ		Tilt Wire Protection Rubber	AA
48	QCNW-A867WJZZ		Tilt Wire(MC500U)	AL
48	QCNW-A490WJZZ		Tilt Wire(MC500K)	AH
49	QPWBHB327WJZZ		Tilt FPC	AS
50	QSW-ZA009WJZZ		Inversion/Strobe Detection SW	AG
51	RUNTKA027WJZZ		Lithium PWB Unit	AE
53	LANGKA029WJFW		PWB Fixing Angle	AF
54	LANGKA033WJFW		Radiation Angle	AB
55	QPWBHB332WJZZ		Cross PWB FPC	AF
56	PSHEGA009WJZZ		Radiation Sheet	AF
57	PSHEGA007WJZZ		Radiation Sheet	AD
58	PSLDMA013WJFW		Shield Case A	AC
59	QPWBHB326WJZZ		CCD FPC	AE
60	PMLT-A035WJZZ		Cushion	AB
61	KLMPVA001WJZZ		Lamp Unit	AQ
62	PMiR-A010WJZZ		Reflection Sheet	AA
63	PGiDM0037TAZZ		Light Guide Plate	AG
64	PSHEP0044TAZZ		Prism Sheet	AG
65	PSHEP0045TAZZ		Diffusion Sheet	AD
66	RLCDVA001WJZZ		LCD Panel	BQ
a	LX-BZ0251TAFD		Floating Screw	AB
b	LX-BZ0253TAFN		Floating Screw	AB
c	LX-HZ0050TAFN		Screw (M1.7 X 4 Nickel, Tap)	AA
d	XiPSN17P03000		Screw (M1.7 X 3 Nickel)	AA
e	XiPSF17P02000		Screw (M1.7 X 2 Black)	AA
f	XiPSN17P04000		Screw (M1.7 X 4 Nickel)	AA
g	XiPSN17P02000		Screw (M1.7 X 2 Nickel)	AA
h	LX-BZA011WJFN		Screw (M1.7 X 3 Silver)	AA
k	LX-BZ0238TAFN		Tilt Screw (M1.7 X 6)	AC
m	LX-HZ0063TAFF		Screw (M1.7 X 6 Black)	AA

CAMERA UNIT PARTS LIST

Ref. No.	Part No.	★	Description	Code
1	PLNSAA001WJN1		Lens	BR
2	LANGKA027WJFW		Lens Fixing Angle	AG
3	CLNS-A001RMA4		CCD Service	BR
4	PFiLWA017WJZZ		Optical LPF	AL
5	PCOVM8031TA00		Dust Protection Rubber	AC
6	DUNTKB322QA00		CCD PWB Unit	—
7	LX-HZ0073TAFD		Screw (M1.7 X 5 Colored Zinc, Tap)	AA
8	XiPSN17P02000		Screw (M1.7 X 2 Silver)	AA
9	LX-HZ0050TAFN		Screw (M1.7 X 4 Silver, Tap)	AA

Ref. No.	Part No.	★	Description	Code

SUPPLIED ACCESSORIES

ACCESSORIES

⚠	QACCZ0053TAPZ	AC Cable(MC500K)	AP
	QCNW-A338WJZZ	USB Cable	AL
	QCNW-A400WJZZ	AV/S Cable	AP
	RRMCG0104TASA	Remote Control	AN
⚠	UADP-0339TAZZ	AC Adapter(MC500U)	AY
⚠	UADP-0341TAZZ	AC Adapter(MC500K)	AZ
	UBATi0086TAZZ	Battery Pack	BE
	KSETVA002WJZZ	Battery Charger	BA
	UBATL0011TAZZ	Lithium Battery	AE
	UBATL0015TAZZ	Lithium Battery	AE
	GCOVAA062WJSA	Lens Hood	AP
	GCOVHA002WJZZ	Lens Cap	AH
	CDSKA0080TA01	SD Card(8MB)	BF
	GDAi-A013WJZZ	Tripod Adapter	AN
	RCORFA012WJZZ	Ferrite Core(x2)	AG
	TCAUHA039WJZZ	FCC Sheet(MC500U)	AE
	CDSKA0081TA01	CD-ROM(Soft Ware)	AH
	TiNS-A233WJZZ	Operation Manual (MC500K)	AS
	TiNSEA015WJZZ	Operation Manual (MC500U)	AT

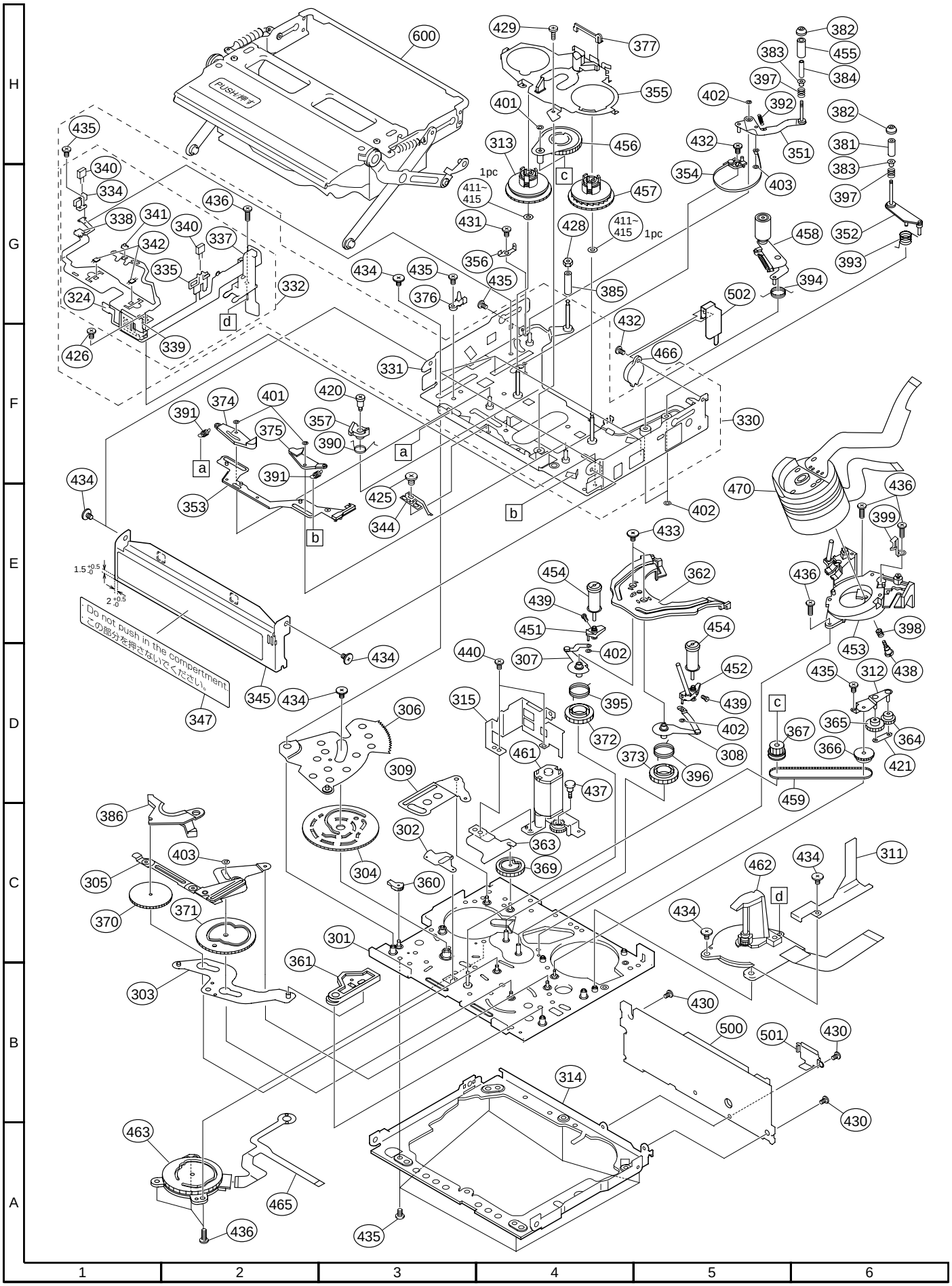
ACCESSORIES
(NOT REPLACEMENT ITEM)

TGANE0044TAZZ	Guarantee Card (MC500U)	—
TGANZ0022TAZZ	Guarantee Card (MC500K)	—
TLABK0001TAZZ	No. Card(x2)	—

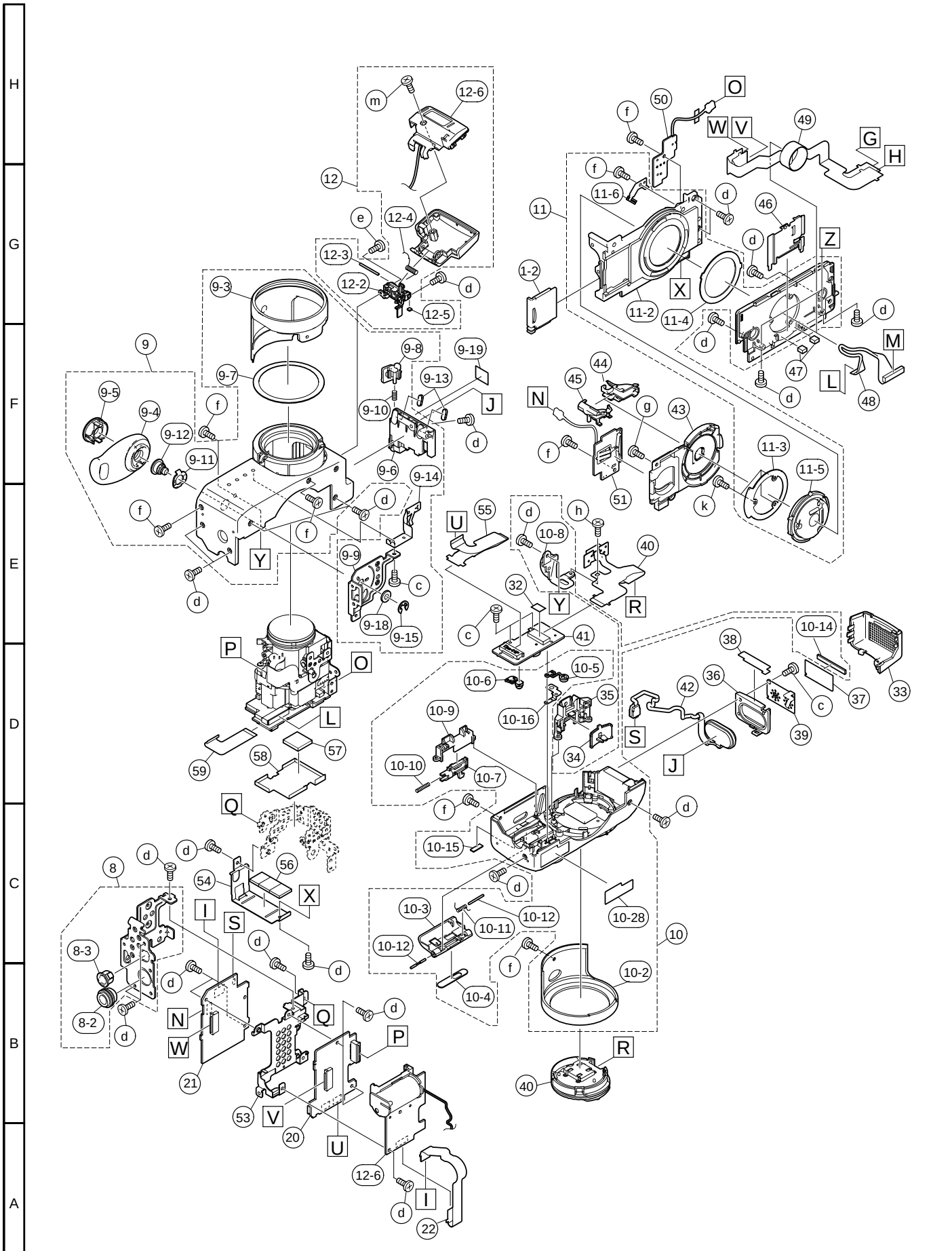
PACKING PARTS
(NOT REPLACEMENT ITEM)

SPAKCA116WJZZ	Packing Case(MC500U)	—
SPAKCA177WJZZ	Packing Case(MC500K)	—
SPAKPA089WJZZ	Strap Pad(MC500U)	—
SPAKAA054WJZZ	Packing Add.(Bottom)	—
SPAKFA062WJZZ	AC Adapter Pad	—
SPAKPA021WJZZ	Side Pad	—
SPAKP6121TAZZ	Wrapping Paper	—
SPAKCA173WJZZ	Packing ADD.	—
SPAKP6129TAZZ	Wrapping Paper	—
SSAKA0087TAZZ	Polyethylene Bag	—

MECHANISM CHASSIS EXPLODED VIEW



LENS UNIT EXPLODED VIEW



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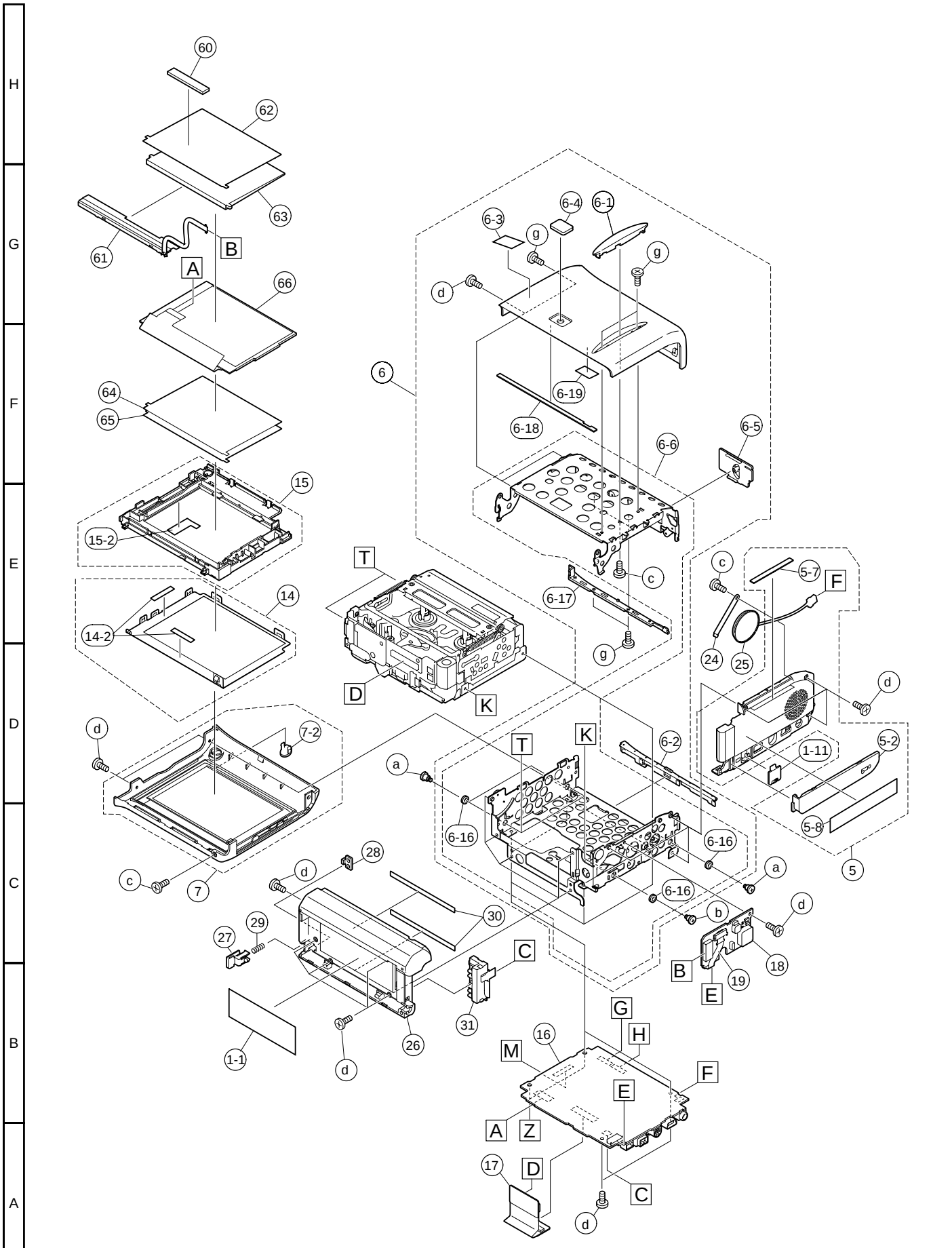
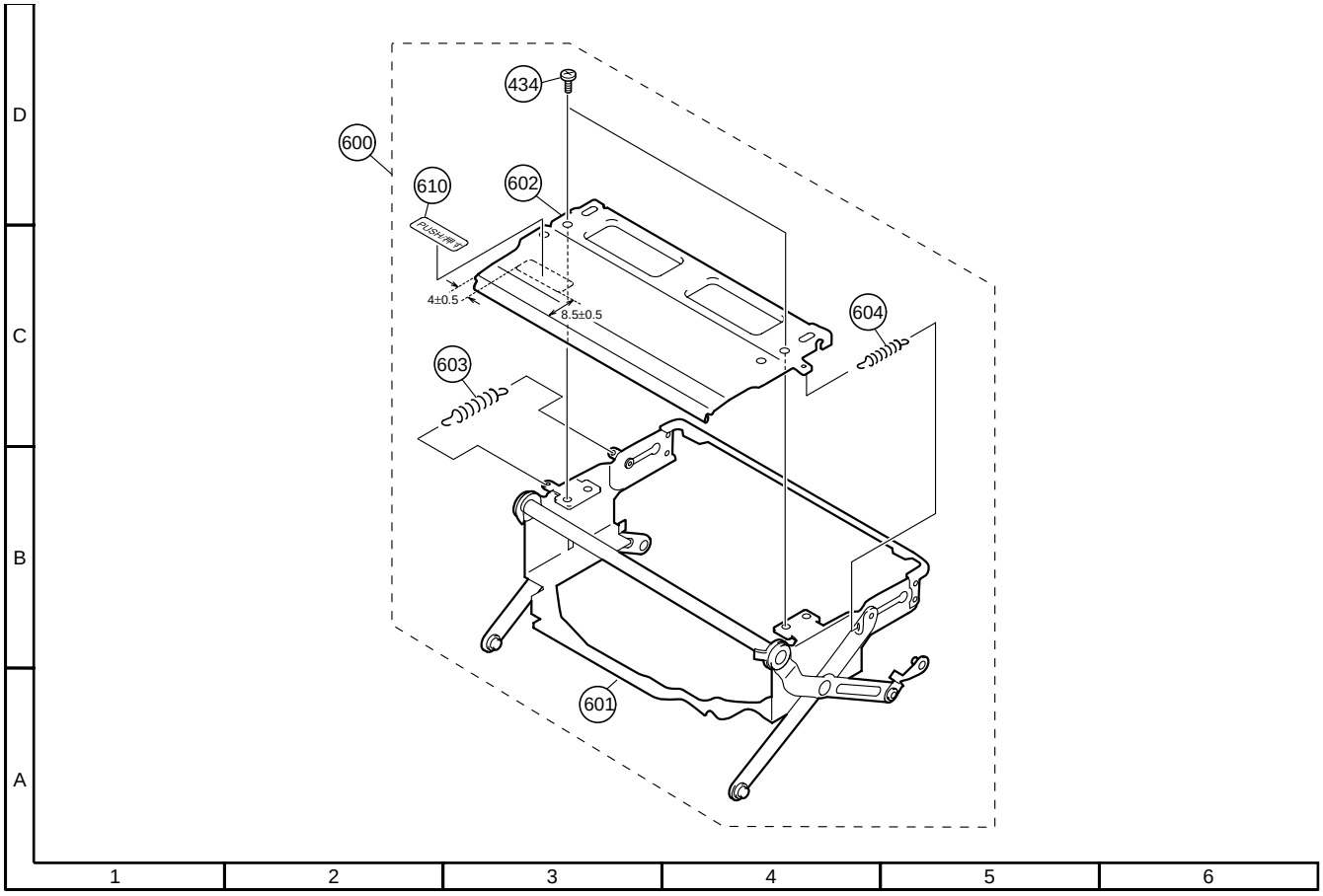
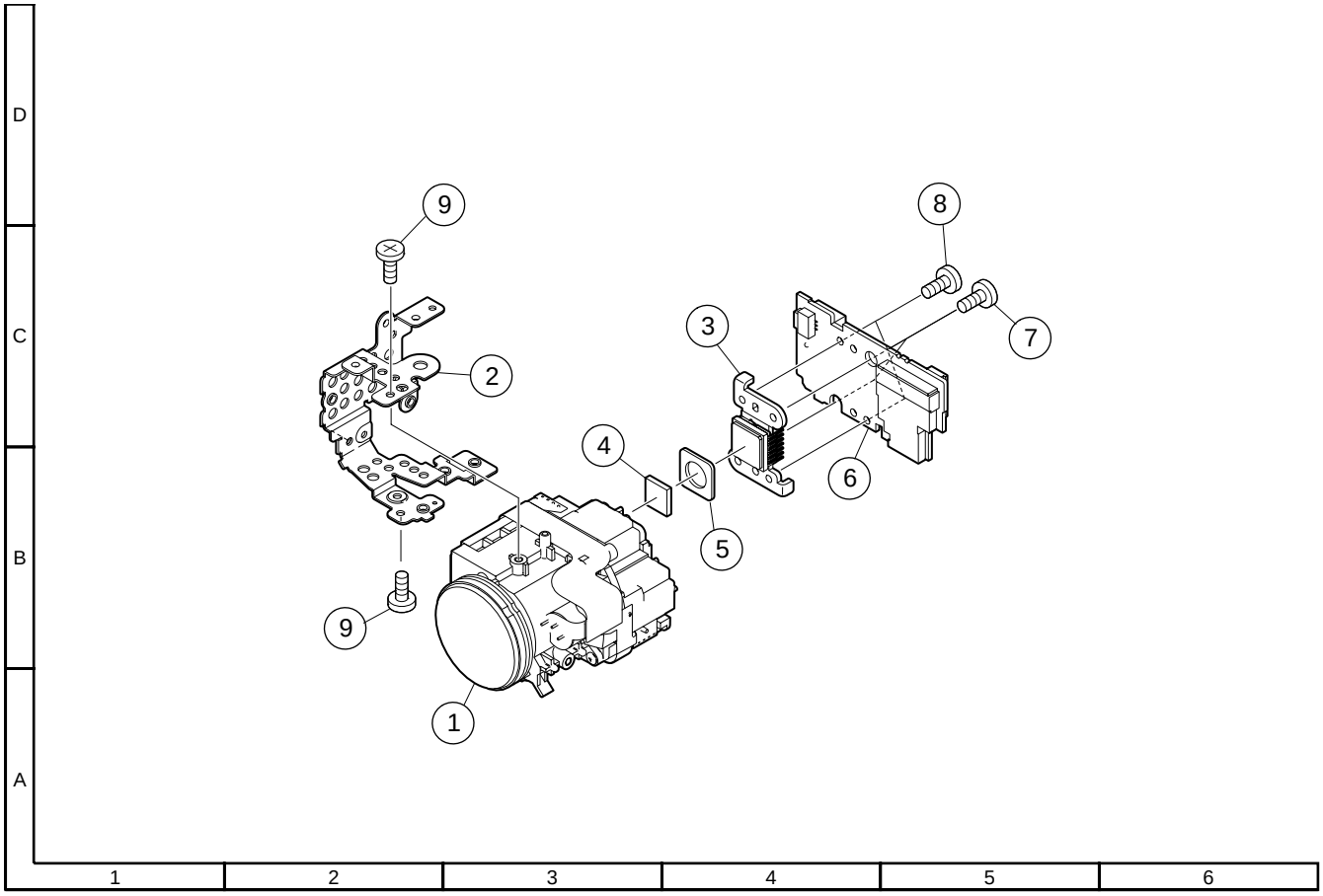


CASSETTE CONTROL EXPLOOD VIEW



CAMERA UNIT EXPLOOD VIEW



VL-MC500U/K SERVICE JIG SPECIFICATIONS

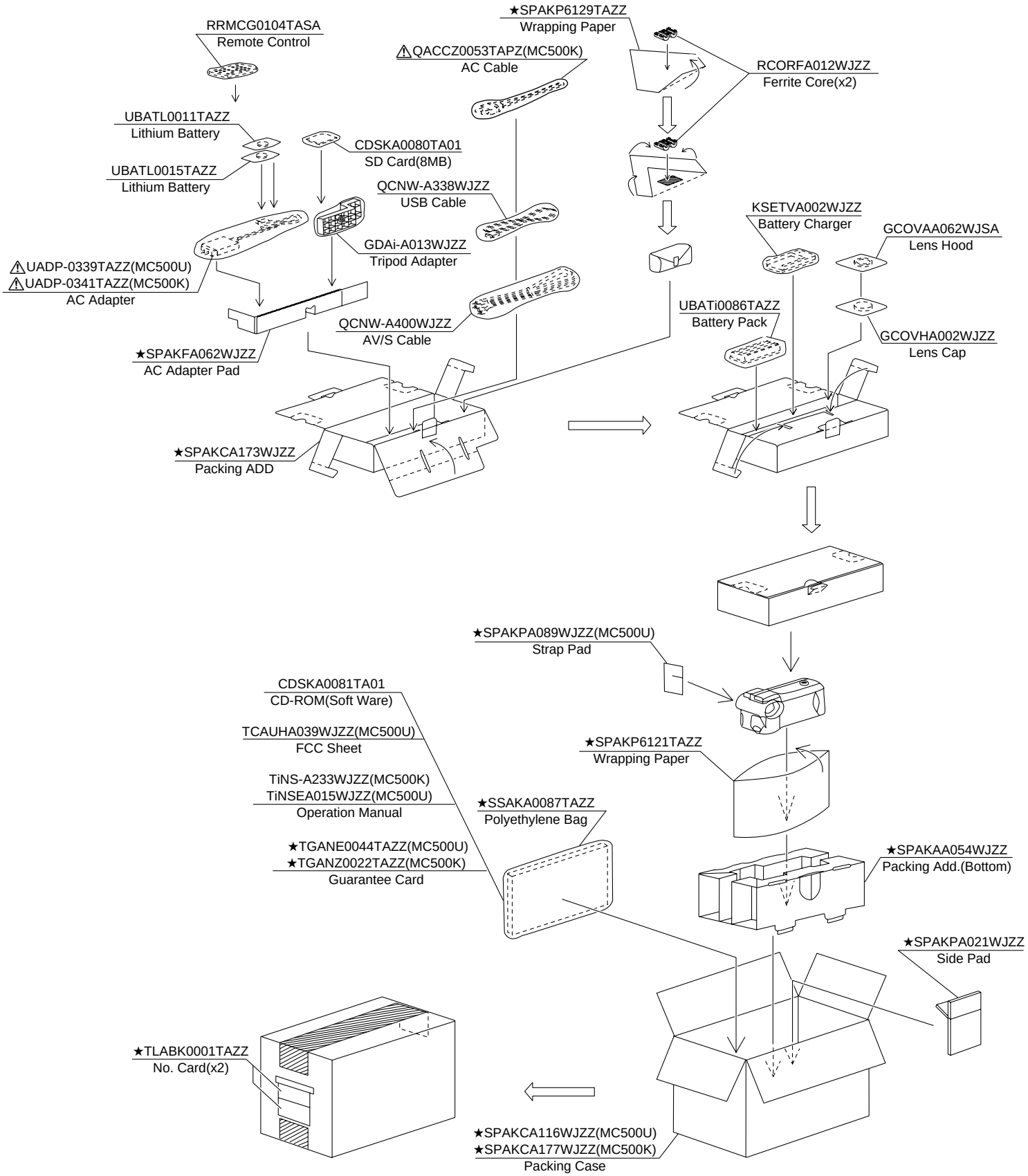
1-1. Adjusting jigs for checking the mechanism

No.	Name	New part	Type number, Application	Part code	Code
1	PB-use cassette torque meter		1mN·m/1.5mN·m	9DASD-1015	DB
2	Torque gauge		For use in VS-REW take up torque adjustment	JiGTG0045	CN
3	Torque gauge head		For use with the above torque gauge	9EQTGH-DH5000	BW
4	Tension gauge 4N		For measuring of pinch roller pressure	JiGSG0400	BK
5	Dial tension gauge		PTG-10	9DAPTG-10-10W	CA
6	Torque screwdriver 150mN·m		No. 0 cross bit, No. 00 cross bit	JiGTD1500RTDH	CB
7	Master plane		For checking the reel base height	9EQMP-VLPD1	CL
8	Height adjustment jig		For height adjusting	9DAHG-PD1	BZ
9	Height adjustment screwdriver		For guide roller adjustment. For Tu guide adjustment. For T roller adjustment. Bit shape.	9EQDRiVER-DH5	BC
10	Alignment tape - I		For tape running adjustment	VR3-GAZXS	CF
11	Alignment tape - II		For Switching Point adjustment	VR3-GTZQS	CG
12	For hexagon nut opposite side 3mm bit		For S guide hexagon nut installation.	95CM22001	BL
13	Reel hub for back tension measurement		Refer to Service Manual.	Prepared in the service station.	–
14	String for measuring the pinch roller pressure		Refer to Service Manual.	Prepared in the service station.	–

1-2. Parts for periodical inspection and maintenance

No.	Name	New part	Type number, Application	Part code	Code
1	Oil		Cosmo Hydro HV22	9EQ-OiL-HV22	AE
2	Cleaning paper		Dusper ∑ (SIGMA) ozu Co., LTD	JiGDUSPER	AP
3	Grease: Moly Coat YM-103		Dow corning	99FGREASE-YM103	AH

18. PACKING OF THE SET



MARK ★ Not Replacement Item

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